Panasonic

Operating Instructions

MEW01552

Revision -

Fire Alarm System EBL512 G3 V2.0.x

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1 Introduction

EBL512 G3 Operating Instructions is a document intended to be used by the end-user and the fire brigade personnel as well as service / commissioning engineers.

Due to continual development and improvement, different S/W versions are to be found. This document is valid for **S/W version 2.0.x**. On the date / rev date of this document x = 0.

Since the EBL512 G3 control unit (c.i.e.) is produced for many countries the look, the texts, the functions, etc. might vary.

Products

Consists of one or more parts (HW) according to a **Product Parts List**. A product has:

- a **type number**

  5000 EBL512 G3 c.i.e. Configured for 128, 256 or 512 alarm points and with or without printer depending on article number.

  5001 EBL512 G3 c.i.e. No front panel and no Plexiglas in the door. Configured for 128, 256 or 512 alarm points depending on the article number.

- an **article number** is often the same as the type no. but a country code can be added (e.g. **SE** for Sweden). If also the letters **PRT** are added in the article number the product comes with a printer. If digits are added to the article number they are showing the number of alarm points configured (e.g. 5000PRTSE-**128**).
- a **product name** (e.g. **EBL512 G3 CU, 128 alarm points, with printer**)

HW

A HW (e.g. a **p**rinted **c**ircuit **b**oard) has:

- a **type number** (e.g. **5010**)
- an **article number**, often = the type no. and sometimes is a country code added (e.g. **5010SE**)
- a **product name** (e.g. **Main Board 128 alarm points**)
- a **p.c.b. number** (e.g. **9290-3B**) and can also have a configuration (e.g. **CFG: 2**) and a revision (e.g. **REV: 2**)
- sometimes a **S/W**

S/W

A S/W has:

- a **version number** (e.g. **V2.0.x**)

- sometimes additional information, such as **Convention** (different functions / facilities), **Language**, **Number of addresses**, etc.

PC S/W

A PC S/W is a program used for programming, commissioning, etc. It has a **version number**.

2 Definitions / Explanations

Definitions / explanations / abbreviations / etc. frequently used or not explained elsewhere in the document.

2.1 PESN AB

Panasonic **E**co **S**olutions **N**ordic **AB**

2.2 Alarm points

Units, which can generate a fire alarm (in the control unit), i.e. analog detectors (sensors), conventional detectors, manual call points, etc.

2.2.1 Smoke detector

Analog and conventional photoelectric (optical) smoke detectors are available.

2.2.2 Sensor

Sensor = Analog detector

2.2.3 Analog detector

Contains an A/D-converter. The **C**ontrol **U**nit pick up the digital values ("sensor values") for each detector individually. All evaluations and "decisions" are then made in the c.i.e. Analog detectors are addressable – an address setting tool is used for the detector's COM loop address and mode settings.

An analog detector has to be plugged in an analog sensor base (**ASB**).

2.2.4 Analog Sensor Base (ASB)

An analog detector is plugged in an **ASB**, which is connected to a COM loop (see below).

2.2.5 Conventional detector

A detector with only two statuses, i.e. normal or fire alarm. The detector has a "closing contact" and a series alarm resistor. Normally plugged in a conventional detector base **CDB** (see below), which is connected to a conventional zone line input. Some types (e.g. water proof types) are connected directly on zone line. An end-of-line device has to be connected in the last unit on the zone line.

2.2.6 Conventional Detector Base (CDB)

A conventional detector is plugged in a CDB, connected to a conventional zone line input.

2.2.7 Addressable

A unit with a built-in address device, i.e. each unit is individually identified, handled and indicated in the c.i.e.

(The unit can be an I/O unit with a zone line input, to which one or more conventional "alarm points" can be connected.)

2.2.8 Conventional zone line input / External line

Input intended for one or more conventional alarm points. End-of-line device in the last alarm point.

2.3 Output unit

Addressable unit with programmable control outputs. Connected to a COM loop (see below).

2.4 Output / Control output

Defined or programmable function. Relay output or voltage output (supervised / monitored), in the c.i.e. or an output unit connected on a COM loop..

2.5 Short circuit isolator (ISO)

Addressable unit for automatic disconnection of a part (segment) of a COM loop (see below) in case of short circuit on the loop. (According to EN54-2: one ISO is required per 32 alarm points.)

2.6 Display unit (DU)

Addressable unit (RS485 line) for fire alarm presentation (incl. user definable alarm text), alert annunciation, etc.

2.7 COM loop

Loop = a cable, with two wires, to which all the addressable units can be connected. Starts in the c.i.e. and it returns back to the c.i.e.

2.8 Control Unit / C.U. / C.I.E.

Control **U**nit = **C**ontrol and **I**ndicating **E**quipment = Unit to which the alarm points are connected (via e.g. a COM loop). Indicates fire alarm, fault condition, etc. Fire Brigade Panel & Control Panel (see below) included or not included. Printer included or not included.

2.9 Fire Brigade Panel (FBP)

Intended for fire alarm presentation, etc. for the fire brigade personnel. Can be a part of the control unit (front) or a separate Display unit (external FBP).

In an ext. FBP, a printer can be included.

2.10 Control panel (CP)

A part of the control unit (a part of the front), intended for the building occupier / officer, service personnel, etc., to "communicate" with the Control Unit / the System.

2.11 System / Installation

One control unit or several control units connected via a TLON network (co-operating control units).

2.12 Network / TLON® / LonWorks® / Echelon / Node / TLON Conn. board / Gateway / Sub net / Backbone net / Router / Repeater

Brief explanations to the words/expressions to be found in connection with a "TLON Network". See also separate TLON Technical description.

TLON® = TeleLarm Local Operating Network = a LonWorks®- based network for communication between several units/nodes. The protocol is LonTalk and the transmission works with doubly-terminated bus topology (Echelon FTT-10). To connect a control unit to the network, a TLON connection board has to be plugged in the control unit. EBL512 G3 also supports redundant TLON system communication. In this case two TLON connection boards have to be plugged in each control unit.

A network can be one channel (FTT-10) or several channels, connected via routers. (In the TLON Network a sub net = a channel.)

Routers are also used to increase the maximum cable length, node to node, in a network.

Router or Repeater is the same type of unit (different configuration). All network programming (configuration) are made with the PC program "TLON Manager".

2.13 LED

LED (**L**ight **E**mitting **D**iode) = Yellow, green or red optical indicator ("lamp").

2.14 External Indicator (LED)

A unit with an red LED connected to a base (ASB / CDB) or a detector with an output for an ext. LED.
Lit when the built-in LED in the detector / base is lit.

2.15 Display / LCD

LCD (**L**iquid **C**rystal **D**isplay) = Display (in the c.i.e. or Display unit) for presentation of fire alarms, fault messages, etc. In EBL512 G3 it is a graphical monochrome LCD (320 x 240 dots) with backlight.

2.16 Door open (Door / Key switch)

In EBL512 G3 and ext. FBP 1826 there is a door switch, which is activated when the door is open. In the ext. FBP 1828 this door

switch is replaced with a key switch.
An open door is indicated in the LCD (i.e. an "open door" icon).

2.17 Site Specific Data (SSD)

The SSD is unique for each installation. All alarm points, presentation numbers, user definable text messages, programmable outputs, etc. are created in the PC program **EBLWin** and also downloaded in EBL512 G3 unit(s) with **EBLWin**.

2.18 Software (S/W) / System program

The software (S/W) – also called Firmware and System program – makes the control unit (the microprocessor) work. It is factory downloaded but a new version can, via the PC program **EBLWin**, be downloaded in EBL512 G3 on site.

2.19 EBLWin

PC program used to create and download the SSD in EBL512 G3 unit(s). Also used to download another / new software version and to upgrade the maximum number of alarm points in EBL512 G3.
Can be used during commissioning / maintenance of the EBL512 G3 system (auto generate COM loop SSD, acknowledge faults, etc.)

2.20 Web-server / EBLWeb config tool

The **Web-server** is used to get EBL512 G3 information as well as remote control via a PC (browser) and an intranet / internet. The Web-server is configured via the PC tool **EBLWeb**.

3 Overview

3.1 The EBL512 G3 system

EBL512 G3 is a microprocessor controlled intelligent fire alarm system, intended for analog addressable smoke detectors, as well as conventional detectors and manual call points. Programmable control outputs and output units are available. Up to 1020 addresses (of which up to 512 can be alarm points) can be connected to each control unit (c.i.e.) - according to EN54-2.
EBL512 G3 is available in several types, versions and configurations. It can be connected to a TLON network, i.e. in a "system", with up to 30 control units. Each control unit has access to all information.

Product type no.	*Product name*
5000	EBL512 G3 c.i.e. With or without a printer. With front and display.
5001	EBL512 G3 c.i.e. Without front, display and printer. No door.

EBL512 G3 is developed and designed according to the European standard EN54, part 2 and 4. The Swedish front conforms to SS3654.

3.1.1 Printer

The control unit EBL512 G3 type **5000** can be delivered with a printer ("PRN" included in the article number) or without a printer.[1]
In Ext. Fire Brigade Panel 1826 it is possible to mount an optional Printer 1835.

3.1.2 Expansion boards

In the control unit (c.i.e.) it is possible to mount up to six expansion boards. The following types are available:

Product type no.	*Product name*
4580	8 zones expansion board
4581	8 relay outputs expansion board
4583	Inputs and outputs expansion board

Regarding the expansion boards, see also the EBL512 G3 Planning Instructions and drawings.

3.1.3 Power supply

The main power source is a built-in switched power supply (rectifier) 5037, 230 V AC / 24 V DC, 6.5 A.
The second power source is a backup battery (2 x 12 V). In the c.i.e.

[1] Printer 5058 is a spare part for the c.i.e. type 5000 with a printer, i.e. it comes without a mounting frame etc.

is space for two 27 Ah batteries. Larger batteries (up to 65 Ah) have to be placed outside the c.i.e.
The batteries and the power supply are connected to the Main board (5010), which handles the charging of the batteries, etc. See the EBL512 G3 Planning Instructions, chapter "Power supply" for more information.

3.2 Software (S/W) versions

Due to continual development and improvement, different S/W versions can be found. When installing a new control unit in a system with "older" control units, you might have to upgrade the S/W in the old control units (or download an older S/W version in the new control unit). T**he same S/W version is required in all control units** in a TLON Network.

3.3 Documents

The following documents are available:

- Planning instructions MEW01351
- Operating Instructions (this doc.)
- Drawings

Normally, information found in one of the documents is not found in another document, i.e. the documents complement each other.

For the TLON Network / TLON Manager, Web-server, etc. are separate documents available.

3.4 Applications

The EBL512 G3 system is intended for small, medium and large installations. The intelligent control units offer the system designer and end user a technically sophisticated range of facilities and functions. Programming (PC programs EBLWin, TLON Manager and EBLWeb) and commissioning of the control units / system is very easy.
Start with one control unit and later when it is required, add more units. The TLON Network makes it possible to install the control units in one building or in different buildings.

3.5 PC programs

The following PC programs are used together with the EBL512 G3 system.

3.5.1 EBLWin

The PC program **EBLWin** is used for programming and commissioning of one or more control units, i.e. to:

autogenerate, i.e. to identify the units connected on a COM loop and make default settings, which can be edited, saved and used as site specific data (SSD).

- create and download / make a backup (upload) of site specific data (SSD).
- download new software / settings / convention / configurations / control unit & system properties / etc.
- create and download the user definable alarm texts shown in the display in the control units / ext. FBPs and other Display Units.
- see the fault status and acknowledge faults.

EBLWin shall have the same version number as the EBL512 G3 software version number, e.g. **2.0**.x and **2.0**.x respectively. (x indicates only a small correction and is not required to be the same.)
Old SSD files can be opened in a newer (higher) version of EBLWin, saved, edited and thereafter downloaded to EBL512 G3 units with the corresponding version.

3.5.2 TLON Manager

The PC program **TLON Manager** is used for the TLON Network programming, installation, etc. (TLON Manager 1.2 and TLON Manager 2.0 can be used.)

3.5.3 EBLWeb Config tool

The PC program **EBLWeb Config tool** is used for configuration of the Web-server II (1598).

4 Control Unit

Figure 1. ***Left****: The EBL512 G3 Control Unit 5000, with printer. The look might vary according to configuration, country, etc.* ***Right****: The EBL512 G3 Control Unit 5001.*

Depending on country, convention, configuration, etc. the look, language and functions might vary. Figure 1 shows an EBL512 G3 type **5000** with a front with texts in English. Fronts with texts in other languages are available. EBL512 G3 is housed in a grey metal cabinet. The door has a Plexiglas ahead of the front and display, see Figure 1. A key is required to open the door to get full access to the push buttons on the front, i.e. the **F**ire **B**rigade **P**anel (**FBP)** and the **C**ontrol **P**anel (**CP**).

EBL512 G3 type **5001** has no front, display and printer and is housed in a grey metal cabinet without a door.

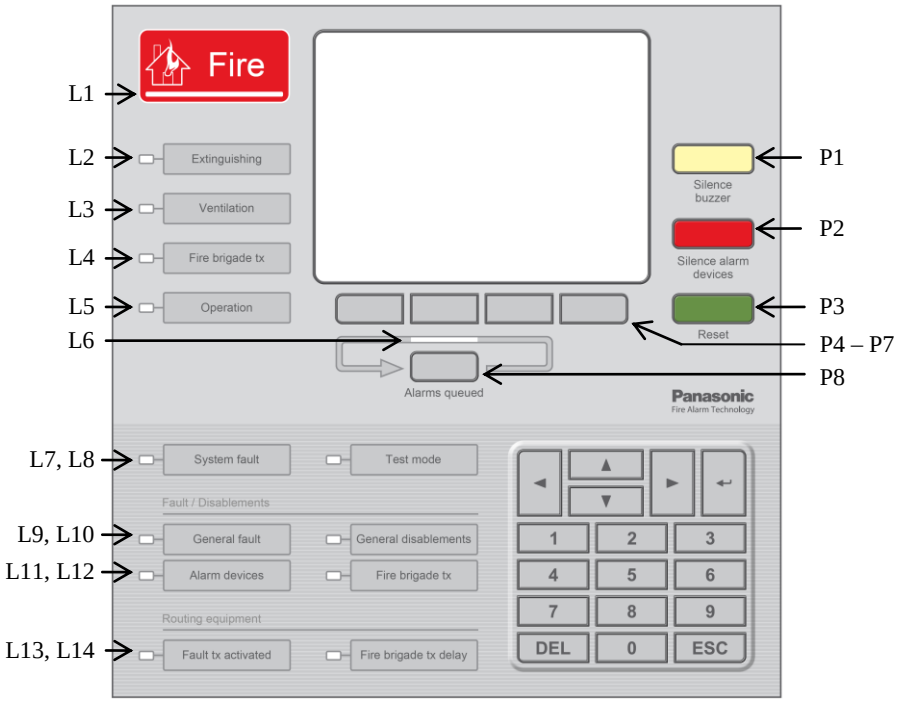


Figure 2. The EBL512 G3 front with display; The Fire Brigade Panel (FBP) is the upper part and the Control Panel (CP) is the lower part. The look might vary according depending on language, country, etc. (A front with texts in English is shown in the figure). See also chapter "LED indicators and push buttons", page 19.

The **FBP** is used by the fire brigade personnel to see which alarm point(s) / zone(s) having activated fire alarm and to take required operational control of the system. In the graphical display, the information displayed in the upper part is depending on how many alarm points / zones having activated fire alarm. In the middle part will the fire alarms be shown, i.e. one alarm point or one zone together with a user definable alarm text (if programmed) plus some other information.

External FBPs are also available.

The **CP** is used to "communicate" with the system, i.e. for commissioning, monthly tests, maintenance, etc. To get access to the system (a menu tree with main and sub menus) and for operational control of the system, up to ten **User names** can be used for three different **User level types**. A **Password** (six digits) for each User name is required.[2]
The CP has several system status LEDs and a keypad.

[2] The same User names and Passwords (for the different user levels) will be used for logon to the Web-server.

In the Australian front only, below the "P3" button, there is also a yellow "Disable" push button, with which you can "Disable zones in alarm".

5 LED indicators and push buttons

LEDs and push buttons can vary according to type and configuration (convention / country / language).

See also Figure 2, page 17.

LED indicators on the Fire Brigade Panel (FBP)		
LED indicator		**Indicating**
L1	Fire (5 red)	Fire alarms (see below) Quiet alarm (normally Australia only) See also chapter "Alarm types", page 43.
L2	Extinguishing (red)	Output(s) for extinguishing equipment activated. (Or a programmable input type "Extinguishing" is activated.)
L3	Ventilation (yellow)	Output(s) for fire/smoke ventilation equipment activated. (Or a programmable input type "Ventilation" is activated.)
L4	Fire brigade tx (red)	Output "Fire alarm" for fire brigade tx (routing equipment) and/or corresponding programmable output(s) of type "Routing equipment") is/are activated. (Or a programmable input type "Activated routing equipment" is activated.) Test of routing equipment in progress (see menu H1).
L5	Operation (green)	The c.i.e. is powered via the rectifier and/or the battery.
L6	Alarms queued (2 red)	More than one alarm point / zone have activated fire alarm. Use push button "Alarms queued" (P8) to scroll amongst the alarm points (zone-address) or the soft key "Next zone" (P5) to scroll amongst the zones.

NOTE! Fire alarms are:
Fire alarm (incl. test mode alarm)
Heavy smoke/heat alarm
Alert Annunciation (AA) alarm
Key cabinet alarm
Acknowledged alarm (New Zealand only)

Push buttons on the Fire Brigade Panel (FBP)		
Push button		**Operation/function**
P1	Silence buzzer (yellow)	Used to silence the buzzer in the c.i.e. when it is sounding.
P2	Silence Alarm devices (red)	Used to silence alarm devices / sounders[3] in the building when they are sounding. Silenced Alarm devices is indicated to the right in the display's soft key area (a symbol near this button), see page 23.
P3	Reset (green)	Used to reset: Fire alarms (see below) Co-incidence alarms (if not automatically reset) For more information see "Alarm reset", page 55. **NOTE!** P3 has to be pressed for > 0.5 sec.
	Disable (yellow)	**NOTE!** *This button exists in the Australian front only!* Disables zones in alarm.
P4 – P7	Soft keys (grey)	The operation/function is shown above the key in the display (i.e. the soft key area). The function of a soft key may vary depending on the situation. If nothing is shown above the key in the display, the key has no function for the moment.[4]
P8	Alarms queued (grey)	Used when LEDs "Alarms queued" (L6) are lit, to scroll/browse through the queued alarm points (zone–address). Function, see chapter "Fire alarm", page 44, under **LEDs "Alarms queued"**. **NOTE!** To scroll/browse through the queued zones, use the soft key "Next zone" (P5).

NOTE! Fire alarms are:
Fire alarm
Heavy smoke/heat alarm
Alert Annunciation (AA) alarm
Key cabinet alarm
Acknowledged alarm (New Zealand only)
Isolated alarm (New Zealand only)

Encapsulated reset (aut. disablement): Press "Reset" (P3) and approx. 0.1 sec. later also "Alarms queued" (P8). See also page 56.

Multiple reset (when Single reset is selected): Press "Reset" (P3) and approx. 0.1 sec. later also ↵ ("Enter").

[3] Outputs of type "Alarm devices" will be de-activated.

[4] The soft key "P7" has the function **Evacuate** in the following conventions: Belgian, British Standard, Hungarian, Spanish and Ukrainian. In all other conventions it has the function **Alert Annunciation Acknowledge**.

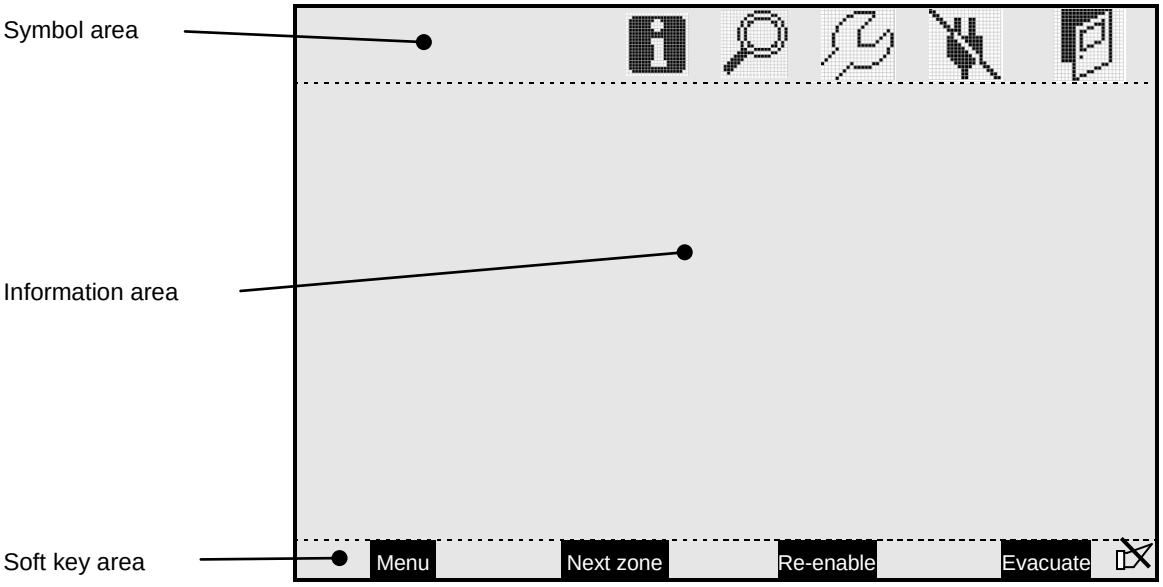
LED indicators on the Control Panel (CP)		
LED indicator		**Indicating**
L7	System fault (yellow)	EBL512 G3 is not running because of S/W, CPU or memory fault, no contact between main board and MMI board or c.i.e. restart (fault code ≠ 00 / 03).
L8	Test mode (yellow)	Zones are in "test mode", see page 90 and 131.
	Fault / Disablements	
L9	General fault (yellow)	Fault(s) in the system, i.e. not acknowledged fault(s) and/or not corrected fault(s). See also page 129.
L10	General disablements (yellow)	Disablement(s) in the system. Also valid for "Single with automatic disablement", see page 56.
L11	Alarm devices (yellow)	**Steady / cont.**: Output(s) type "Alarm device" are disabled. **Blinking**: One or more supervised outputs type "Alarm device" have generated fault(s). This is also valid when the c.i.e. has no "contact" with a unit with such an output, e.g. 3377, 3379, 3364, etc.
L12	Fire brigade tx (yellow)	**Steady / cont.**: Output(s) for "Routing equipment" disabled via menu (H2/B3 or B9) or via open door. **Blinking**: Routing equipment power supply output[5] or one or more supervised outputs (of type "Routing equipment" have generated fault(s). This is also valid when the c.i.e. has no "contact" with a unit with such an output, e.g. 3361, etc.
	Routing equipment	
L13	Fault tx activated (yellow)	One or more not acknowledged faults.[6] Output "Fault condition" for fault tx (routing equipment) is activated. Test of routing equipment in progress (see menu H1). Sensitive fault detection mode (see menu H5/A2) is on.
L14	Fire brigade tx delay (yellow)	The **A**lert **A**nnunciation function is enabled, i.e. time channel controlling this function is "on". The **AA** function is described in the EBL512 G3 Planning Instructions, chapter "Alert Annunciation". LED "L14" will be "on" if the **AA** function is enabled for at least one alarm point / zone. Normally is only one time channel used for this function but two or more channels can be used. The **AA** function can, as an alternative, be continuously "on".

[5] Main board 5010 term. block "J3:3-4", fuse F8 (T500mA L 250 V – TR5).
[6] See also chapter "Fault acknowledge", page 70.

Push buttons / Keypad on the Control Panel (CP)		
Key/push button		**Operation/function**
	↲ (Enter)	Used to log on, i.e. to get access to the menu tree (via an access code) and to accept a menu and accept input of data. Also used by fault signal and service signal to acknowledge the selected fault / analog smoke detector.
	◄ ► ▲ ▼	Left / right keys are used to move the cursor in a menu. Up / down keys are used to scroll between the menus.
	1 – 9 and **0**	Numeric key pad for the digits 0-9. Can be used to input data and in the menu system to jump to a menu with a corresponding number (e.g. **5** for a jump to menu H**5**).
	DEL	Used to **clear** /delete all visible entry fields.
	ESC	Used to stop input of data or to step "one step up" in the menu system (e.g. from a sub menu to the main menu). NOTE! To leave the menu system, use the soft key "Escape menu" (P4).

6 The display (LCD)

6.1 Areas in the display



- **Symbol area:** Some events are indicated with symbols, see 6.2 below.
- **Information area:** General area for all kind of information and the menu system.
- **Soft key area:** The function of the soft key respectively is shown here, i.e. it will vary depending on the situation, convention and language. If no text is shown, the soft key has no function. When "Evacuate" is not used this soft key may be used for "Alert Annunciation acknowledge". In the New Zealand convention it is used for "Acknowledge alarm".).
  Silenced Alarm devices is indicated by the symbol to the right in this area.

6.2 The symbol area

The symbol area is at the top of the display, see chapter 6.1.

The following table explains the meaning of each symbol:

The symbol area	
Symbol	**Indicating**
	The door is open in any c.i.e. or external FBP in the system. See also page 40. See also menu H4/U3.
	Loss of mains in any c.i.e. or ext. power supply unit in the system, i.e. the unit respectively is out of 230 V AC and is power supplied via batteries.
	The week average sensor value is over the service level for one or more analog smoke detectors in the system. See also page 114 and menu H4/U5.
	The c.i.e. is set in "Sensitive fault detection mode" via menu H5/A2, see page 120.
	One or more "Technical warnings" are generated in the system. See also menu H4/U6.

Note that the symbol area may be suppressed see 6.3.

6.3 The information area priority order

When the control unit / system is in normal operation (quiescent state), i.e. no fire alarms, no faults, no disablements, no service signals, no zones in test mode, no activated interlocking in / outputs, and/or Alert Annunciation function not enabled, only the LED "Operation" (L5) should be lit and some **system information** is shown in the control unit display. However, the system information has the lowest priority and more important information suppresses less important. In some cases also valid for the symbol area.

The priority order is shown in the following table:

Priority	Event	Symbol area is visible
1	Fire alarms (see below)	No
2	Quiet alarm	No
3	Co-incidence alarm	No
4	Delayed alarm	No
5	Pre-warning	No
6	Test mode alarm	No
7	AAF alarm[7]	Yes
8	Evacuate information[8]	Yes
9	*New Zealand convention only:* Routing equipment left isolated	Yes
10	Fault (not acknowledged)	Yes
11	Disablement	Yes
12	Zones in "Test mode"	Yes
13	Interlocking input / output active	Yes
14	System information	Yes

NOTE! Fire alarms are:
Fire alarm
Heavy smoke/heat alarm
Alert Annunciation (AA) alarm
Key cabinet alarm
Acknowledged alarm (New Zealand only)
Isolated alarm (New Zealand only)

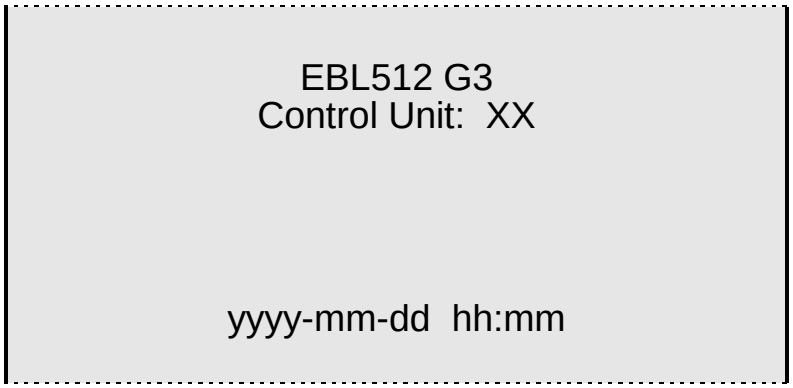
The different type of events and the menu system are described in other parts of this document. Regarding "System information", see 6.4.

[7] The AAF function is used in conjunction with an AAF Control, which is available on the Australian market only.

[8] Only valid for Belgian, British Standard, Hungarian, Spanish and Ukrainian conventions.

6.4 System information in the LCD

EBL512 G3, control unit number, date and time are displayed. The exact look is convention / language dependent.
One example of the information area:



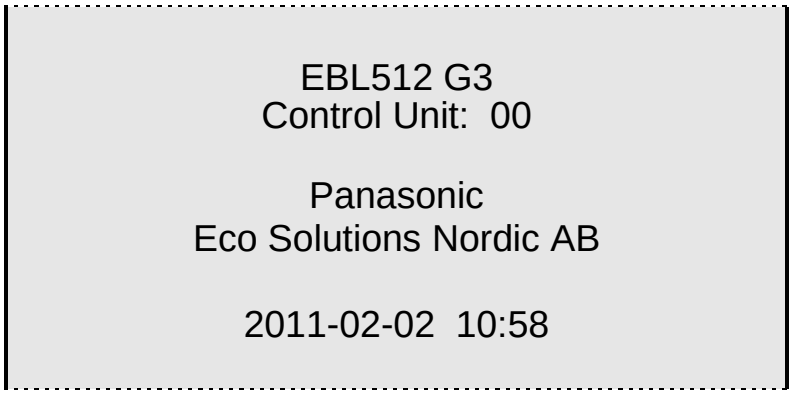
yyyy-mm-dd = (Date) Year-Month-Day
Control Unit; XX = 00-29
hh:mm = (Time) hour:minute

NOTE!
When the Russian, Ukraine, Australian or the New Zealand language is selected the date is shown as follows: **dd-mm-yyyy**.

6.4.1 User definable system information

User definable system / installation information (created and downloaded via EBLWin) can be displayed in the middle of the display. Two rows are available. In total 38 characters.
This information is shown in all control units in the system.

One example:



7 User level, User name & Password

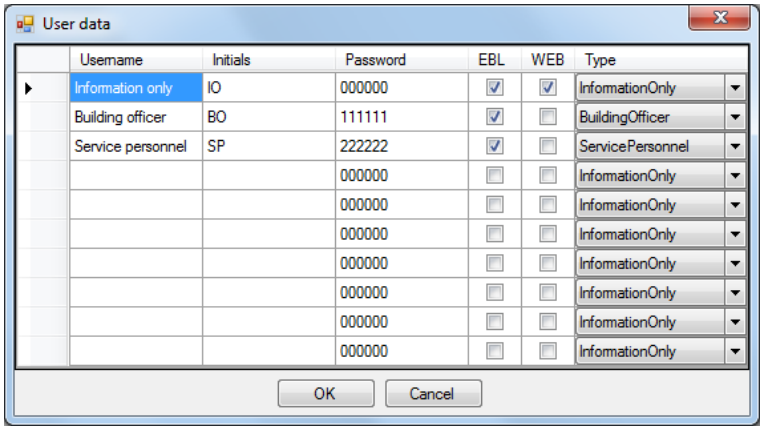
EBL512 G3 has different user levels for different kind of users.

To log on to an EBL512 G3 (version ≥ 2.0) a **User name** and a **Password** are required. Ten different User names with individual Passwords can be used. Each User name is for a specific user level, which has access to specific menus according to the following table.

User level according to EN54-2	User level name / type	Required action / equipment	Access to
1	-	No. (Hole in the Plexiglas.)	Alarms queued button.
2A	-	Fire brigade key. (To open the door.)	Like 1 + Silence buzzer, Silence alarm devices & Reset buttons.
2B	Information only	Like 2A + log on as "Information only"	Like 2A + keypad. Menu H4, H6 [a], H9 [b] & H10
2C	Building officer	Like 2A + log on as "Building officer"	Like 2A + keypad. H1-H4, H6, H7, H9 & H10
3A	Service personnel	Like 2A + log on as "Service personnel"	Like 2A + keypad. H1-H10
3B	-	PC + EBLWin + H/W key	SSD & S/W download
4	-	PC + EBLWin + H/W key + special password	SSD & S/W download + reset of alarm counter.

[a] Information only, i.e. the faults cannot be acknowledged.
[b] Menu H9/C1 only.

Via EBLWin (menu "System") are ten different User names with individual Passwords possible to define in the "User data" dialog box. They can be used to log on to an EBL512 G3 (version ≥ 2.0) and/or Web-server access. Three User names and Passwords are default:



7.1 User level 1

With the door closed, **anybody** has access to the push button "Alarms queued" (P8) to scroll / browse through the queued alarms.

7.2 User level 2A

After the door has been opened with the fire brigade key ("Door open" symbol in the symbol area), **the user / fire brigade personnel** have access to the following push buttons:

Push button	**Operation/function**
P1	Silence the buzzer in the c.i.e.
P2	Silence all alarm devices (sounders).
P3	Reset fire alarms. (see below)

NOTE! Fire alarms are:
Fire alarm (incl. heavy smoke/heat alarm)
Alert Annunciation (AA) alarm
Key cabinet alarm
Co-incidence alarm (if not reset automatically)
Acknowledged alarm (New Zealand only)
Isolated alarm (New Zealand only)

7.3 User level 2B

After the door has been opened with the fire brigade key ("Door open" symbol in the symbol area), you have access to level 2A and after log on as "Information only" (level 2B), access to the following menus:

H4 Present system status
U1 Disablement
U2 Disablement by time channel
U3 Open doors
U4 Sensor values
U5 Sensors activating SERVICE signal
U6 Technical warning
U7 Event log
U8 Information
H6 FAULT acknowledge **NOTE!** Information only!
H9 Interlocking outputs and inputs
C1 Activated interlocking outputs / inputs
H10 Change password (In this case for "Information only".)

7.4 User level 2C

After the door has been opened with the fire brigade key ("Door open" symbol in the symbol area), you have access to level 2A and after log on as “Building officer” (level 2C), access to the following menus:

H1 Perform monthly test
H2 Disable or re-enable
B1 Zone or Zone / Address
B2 Output
B3 Output type
B4 Alarm devices
B5 Routing equipment
B6 Alert annunciation function
H3 Set calendar and clock
H4 Present system status
U1 Disablement
U2 Disablement by time channel
U3 Open doors
U4 Sensor values
U5 Sensors activating SERVICE signal
U6 Technical warning
U7 Event log
U8 Information
H6 FAULT Acknowledge
H7 Perform ZONE TEST ("Test mode")
H9 Interlocking outputs and inputs
C1 Activated interlocking outputs / inputs
C2 Activate / deactivate interlocking output
C3 Disable / re-enable interlocking output
H10 Change password (In this case for “Building officer”.)

7.5 User level 3A

After the door has been opened with the fire brigade key ("Door open" symbol in the symbol area), **the service / maintenance personnel** have access to level 2A and after log on as "Service personnel" (level 3A), access to all menus, i.e. like level 2C and also to the following menus:

Same menus as in access level 2C **plus** the following:
H5 Service
A1 Calibration of supervised outputs
A2 Sensitive fault detection mode
A3 Service mode for COM-loop
A4 Display current consumption in control unit
A5 Display current consumption on COM-loop
A6 Display statistics for communication
A7 Activate address setting mode for DU
A8 SSD information
H8 Maintenance
S1 Dis- / Re-connect loop / zone line input
S2 Acknowledge SERVICE signal
S3 Clear weekly average
S4 Test of alarm devices
S5 Safe shut down of control unit
S6 Activate address in alarm mode
S7 Synchronize the control units
S8 Activate / Reset outputs
H10 Change password (In this case for "Service personnel".)

7.6 Access level 3B

Used by Service / maintenance / commissioning engineers when a PC (i.e. **EBLWin**) is to be connected to EBL512 G3 for backup (upload), download of site specific data (SSD) and/or download of software. EBLWin require a hardware key.

7.7 Access level 4

Used by manufacturer or by personnel authorised by the manufacturer for re-initialisation (reset) of the alarm counter, change software configurations, on-line status checking, etc. A special password is required.

8 "Silence Alarm devices"

In the control unit front (the FBP part) there is a push button "Silence alarm devices" (P2).

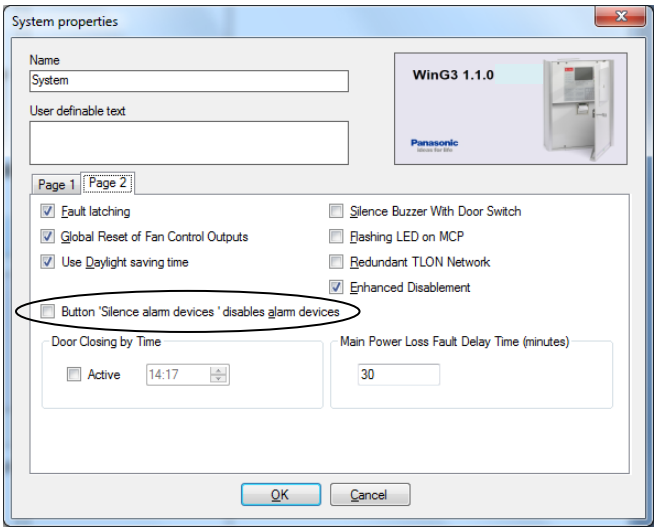
When the alarm devices are activated (sounding)[9] and the push button "Silence alarm devices" is pressed, the following will happen:

- is shown in the display (i.e. to the right in the "Soft key area").
- The activated outputs programmed for sounders (i.e. type "Alarm devices", will be turned OFF (de-activated)[10]

If the push button "Silence alarm devices" is pressed again, the sounders will automatically sound again.

In case of a new alarm the sounders will automatically sound again.

In EBLWin, the option *Button "Silence alarm devices" disables alarm devices* can be selected.



In this case the button "Silence alarm devices" (P2) will have the same function as the menu "**Error! Reference source not found.**". See also chapter "Disable or Re-enable alarm devices", page 35.

In the New Zealand convention only, the "FIRE" LEDs will indicate steady instead of blinking when the alarm devices are disabled.

[9] E.g. during Fire alarm or Alert Annunciation alarm.

[10] Including Addressable siren 3377 / 4477, Addressable sounder base 3379 and Addressable beacon 4380.

8.1 Silence alarm devices (inside switch)

NOTE! The functions in this chapter are normally used in **New Zealand** only.

The button "Silence alarm devices" (P2) is called the "inside switch" and has the following function:

The inside switch toggles between two states.

- **Alarm devices disabled**
  All programmable outputs of type "Alarm devices" are disabled, i.e. they cannot be activated.
- **Alarm devices not disabled**
  All programmable outputs of type "Alarm devices" are enabled, i.e. they can be activated.

If the inside switch is in its disabled state when the c.i.e. door is being closed the buzzer will beep steady (continuously) and the message "`Silence switch left active`" will be shown in the display. For priority order see chapter "The information area priority order", page 25.

NOTE! The inside switch has no function if the outside switch (see below) is activated (ON).

8.2 New Zealand FB Silence switch (outside switch)

NOTE! The functions in this chapter are valid for the **New Zealand** convention only.

The "**New Zealand FB Silence switch**" is also called the "outside switch" since it is placed outside the c.i.e. The outside switch is a key switch connected to a programmable input with the trigger condition "New Zealand FB Silence switch".

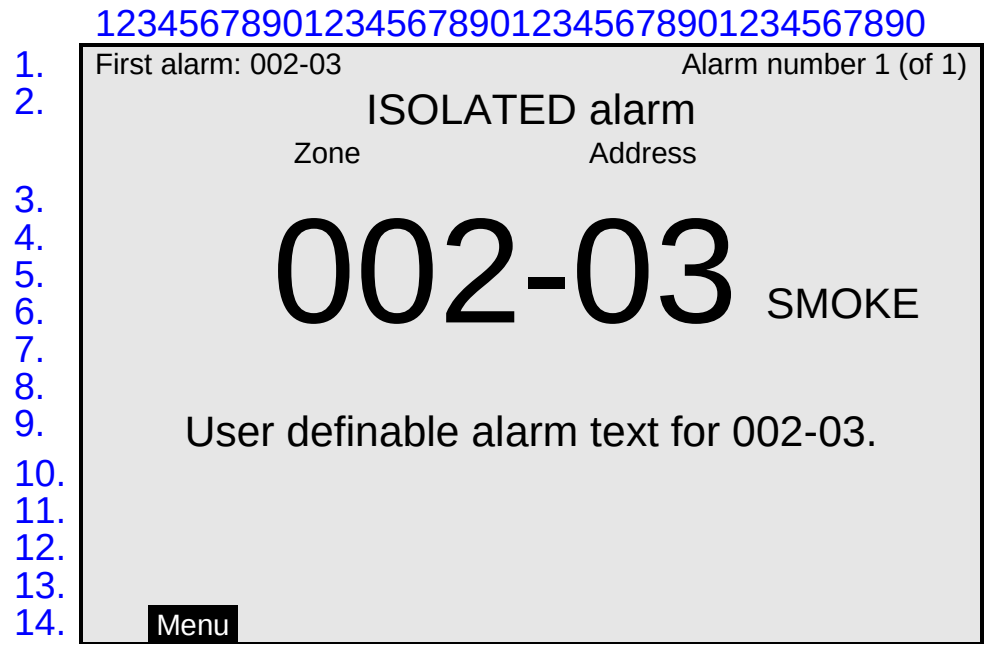
The outside switch can be in two states.

The outside switch is turned ON (i.e. from not activated to activated state):

- All programmable outputs of type "Alarm devices" are disabled, i.e. they cannot be activated. The "inside switch" (see above) has no function.
- The c.i.e. built-in buzzer is silenced.
- A fault is generated:
  "`FAULT: FB Silence switch active`".

The outside switch is turned OFF (i.e. from activated to not activated state):

- "FAULT: FB Silence switch active" will be Serviced.[11]
- Any fire alarm ("ALARM") and acknowledged alarm ("ACKNOWLEDGED") will automatically be disabled / isolated. (I.e. it has to be re-enabled via menu H2/ B5.) Indicated by LED "General disablements" on the c.i.e. front.
- Any fire alarm ("ALARM") and acknowledged alarm ("ACKNOWLEDGED") will automatically change the state to "Isolated alarm" (see below) and in the fire alarm list (presented in the display) **"ALARM"** or **"ACKNOWLEDGED"** will be replaced with **"ISOLATED"**.
  An example:



[11] Since this fault is always latched, it has to be acknowledged via menu H6.

9 Disable or Re-enable alarm devices

Outputs programmed for sounders[10] (i.e. type "Alarm devices") can via menu H2/B4 be **collectively** disabled for all control units. This is indicated by LED **Fault / Disablements** "General disablements" (L10) and "Alarm devices" (L11), which are steady ON.
In case of a fire, the sounders will **remain** disabled, i.e. the alarm devices will not sound until they are re-enabled again via menu H2/B4.

NOTE!

Outputs of type "Alarm devices" cannot be individually disabled, not even via menu H2/B2 Disable or Re-enable Output.

See also chapter "Test of alarm devices (H8/S4)", page 139. All outputs of type "Alarm device" for a specified control unit or all, can be activated for an alarm device test.

10 "Silence buzzer"

The **buzzer** in the control unit will sound for:

- Fire alarm[12] (0.4 / 0.4 sec.)
- Co-incidence alarm (2-zone or 2-unit dependent fire alarm): When only one **zone** or one **zone / address** (alarm point) is in alarm status (0.8 / 5 sec.)
- Pre-warning (0.8 / 5 sec.)
- Quiet alarm (0.8 / 5 sec.)
- Fault (continuous)
- Disablements and Faults (1 sec. directly after the door to the c.i.e. is closed.)
- Activated interlocking input (0.8 / 0.8 sec.), if this option is selected via EBLWin.

Press "Silence buzzer" (P1) **to silence the buzzer.**

In case of a new alarm (pre-warning, co-incidence alarm, etc.) or if the push button "Silence buzzer" is pressed again, the buzzer will automatically sound again.

Silence buzzer by open door

In EBLWin the function "Silence Buzzer by Door Switch" can be selected. The buzzer will then be turned off as long as the control unit door is open. (This function is a violation to the EN54-2 standard.)

EBL512 G3 c.i.e. type no. 5001

This unit has no front and no built-in buzzer.

[12] Incl. Heavy smoke / heat alarm, AA alarm, Key cabinet alarm and Acknowledged alarm (New Zealand only).

11 Disable or re-enable Output

All control outputs (except outputs of type “Alarm devices”) can via menu H2/B2, be **individually** disabled:

- Loop unit xxxxxx output x
- Control unit xx S0
- Control unit xx R0
- Control unit xx expansion board x output x

This is indicated by LED **Fault / Disablements** "General disablements" (L10).

They will remain disabled until they are re-enabled again via menu H2/B2.

See also chapter "Output type (H2/B3)", page 99.

See also chapter "Activate / Reset outputs (H8/S8)", page 147. An output can be activated for an output test.

12 Disable or re-enable Control, Ventilation, Extinguishing and Interlocking outputs

All control outputs programmed as type:

- Control (general)
- Ventilation (Fire ventilation)
- Extinguishing
- Interlocking

… can via menu H2/B3 be **collectively** disabled for a specified control unit or all control units. This is indicated by LED **Fault / Disablements** "General disablements" (L10).

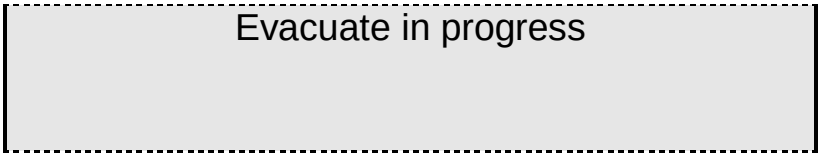
They will remain disabled until they are re-enabled again via menu H2/B3.

See also chapter "Activate / Reset outputs (H8/S8)", page 147. An output can be activated for an output test.

See also chapter "Activate / deactivate interlocking output (H9/C2)", page 150. An interlocking output can be activated for an output test.

13 Evacuate

When the soft key "Evacuate" (P7)[13] is pressed[14], all outputs[10], programmed for sounders (i.e. type "Alarm devices"), will be **collectively** turned ON (steady). This is indicated in the LCD:



The sounders will remain turned ON until they are turned OFF by pressing the soft key "Evacuate off" (P7).[15]

NOTE 1! The alarm devices (sounders) will always be activated steady (sound continuously) irrespective of the fact that the outputs can be set to anything else for fire alarm (e.g. intermittent).

NOTE 2! The text "Menu" above the soft key (P4) is visible in the display only if the door in the c.i.e. is open, while the text "Evacuate" / "Evacuate off" above the soft key (P7) is always visible in the valid conventions[13].

[13] The soft key "Evacuate" is only visible / valid in some conventions, i.e. the Belgian, British Standard, Hungarian, Spanish and Ukraine conventions.

[14] Alt. when a programmable input is activated. One input per c.i.e.

[15] Alt. when the programmable input is de-activated.

14 Open door

A special key is used to open the control unit door to get access to the front / system. The same type of key is also used to open the ext. FBP door.

If any door in the system is open the following symbol is shown in the display's symbol area:

See also chapter Open doors (H4/U3), page 110.

14.1 Outputs for routing equipment (Fire brigade tx and Fault tx)

Via EBLWin the following can be programmed (default settings shown):

Disable routing equipment by door switch

- ⊙ **None**: Open door in a C.U. or an ext. FBP will **not** disable the output(s) for routing equipment (Fire brigade tx and fault tx).
- ○ **Any control unit door**: Open door in any C.U. will disable the output(s) for routing equipment (Fire brigade tx and fault tx) in all C.U:s.
- ○ **Any door**: Open door in any C.U. or any ext. FBP will disable the output(s) for routing equipment (Fire brigade tx and fault tx) in all C.U:s.

Disabled outputs for routing equipment are indicated by the LEDs **Fault / Disablements** "General disablements" (L10) and "Fire brigade tx" (L12) and listed in menu H4/U1.

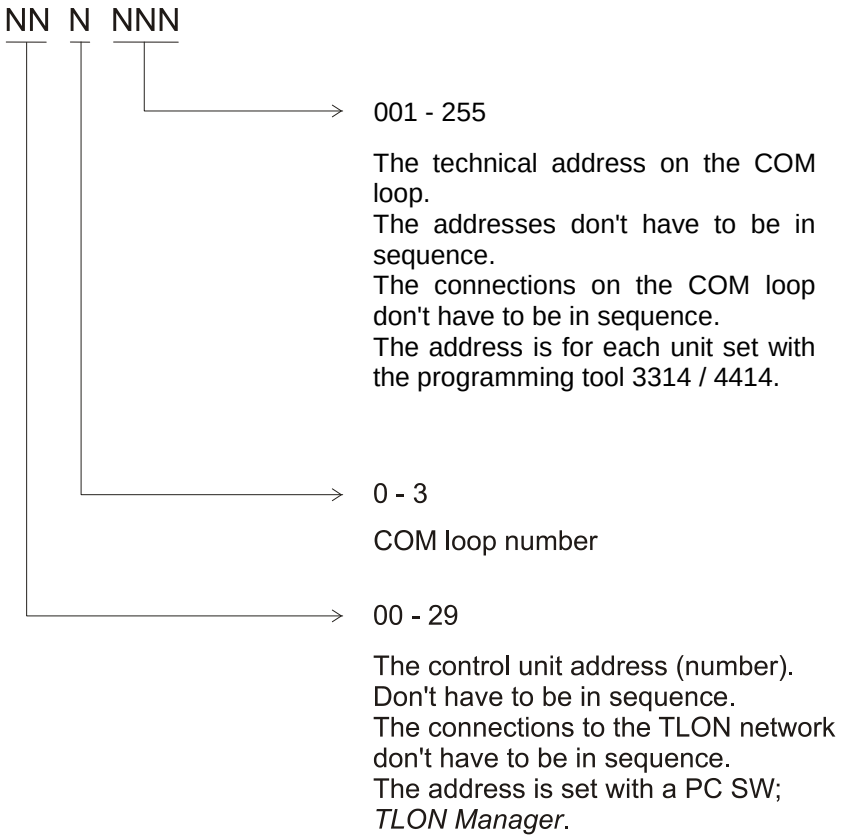
14.2 Silence buzzer with door switch

Via EBLWin can be set that the built-in c.i.e. buzzer will be silenced when the c.i.e. door is open.

15 Technical number / Presentation number

15.1 Technical number for COM loop units

The technical number, NNNNNN, is used when programming all units connected to the COM loops.
Technical number is also used to identify which unit has generated a fault.


NN N NNN
001 - 255
The technical address on the COM loop.
The addresses don't have to be in sequence.
The connections on the COM loop don't have to be in sequence.
The address is for each unit set with the programming tool 3314 / 4414.
0 - 3
COM loop number
00 - 29
The control unit address (number).
Don't have to be in sequence.
The connections to the TLON network don't have to be in sequence.
The address is set with a PC SW; *TLON Manager*.

NOTE!

Totally **1020**[16] **COM loop (technical) addresses** can be used for one control unit, of which **up to 512** addresses can be used for **alarm points**.

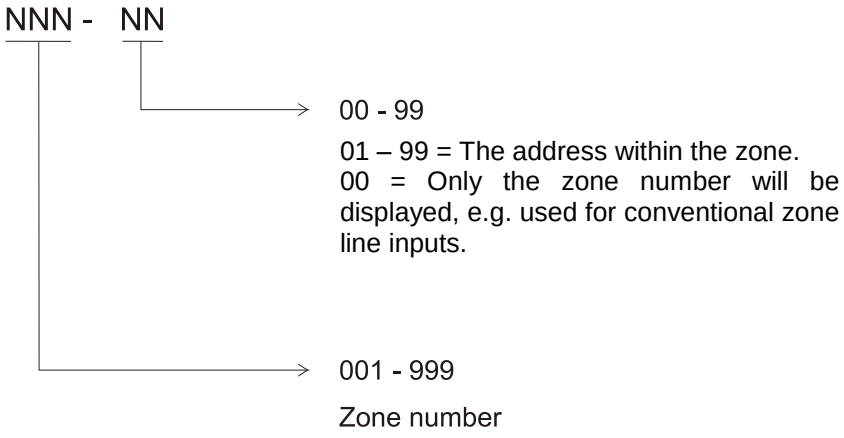
A brand new detector is factory set to COM loop **(technical)** address 000. Connected on the COM loop, the detector LEDs will start blinking every second, indicating that an address (001 - 255) has to be set before the detector will work.

[16] Since **(technical)** address 000 cannot be used, the total number of addresses is 4 x 255 = 1020

15.2 Presentation number

For each fire alarm point / input / zone, a presentation number, **NNN-NN**, has to be programmed. The presentation number is shown in the c.i.e. display and ext. FBP display[17], to identify the point / zone activating fire alarm. It is also used to disable / re-enable fire alarm points / zones and as trigger conditions in control expressions to activate programmable outputs.

Together with the presentation number, a user definable 40 characters text message (alarm text) can be displayed (if programmed).


NNN - NN
00 - 99
01 – 99 = The address within the zone.
00 = Only the zone number will be displayed, e.g. used for conventional zone line inputs.
001 - 999
Zone number

NOTE! Zone **numbers** 001-999 can be used but in accordance with the EN54-2 standard not more than **512** alarm points and/or zones can be used per c.i.e.

[17] Also in the Alert Annunciation Units and Presentation Units ("Display Units").

16 Alarm types

In case of a fire, analog detectors (sensors), conventional smoke and/or heat detectors, manual call points and programmable inputs can activate **fire alarm**. If somebody illegally breaks into a key cabinet, this will also activate a "fire alarm" (i.e. a key cabinet alarm).

A fire alarm could be an **Alert Annunciation alarm**, i.e. the activation of the routing equipment (fire brigade tx) is delayed during an acknowledgement time and an investigation time respectively.

The analog detectors can also activate two other types of "alarm", i.e. **Pre-warning** and **Heavy smoke alarm** / **Heavy heat alarm**.

"Two unit dependent" addressable alarm points (normally only smoke detectors) and "2-zone dependent" zones, can activate a **Co-incidence alarm**.

Quiet alarm is normally used on the Australian market only, for fan control.

In the Australian convention only, an **Alarm Acknowledgement Facility** function can be used. During the Acknowledgement Period and the Investigation Period respectively, there will only be an indication in the c.i.e. display. **NOTE!** Special hardware is required.

Acknowledged and **Isolated alarm** is a fire alarm function only used in New Zealand.

Regarding the different alarm types, etc., see the following chapters.

NOTE!
In the following chapters are all different alarm types described.

The figures in this document show the essential information and **might not look exactly** as shown in the display.

16.1 Pre-warning

Activation of Pre-warning is an option that has to be enabled (via EBLWin) for the control unit respectively. **Note!** Pre-warnings activated in any control unit in the system will always be presented in all control units and all programmable outputs in the system (with trigger condition pre-warning) will be activated (if not disabled).

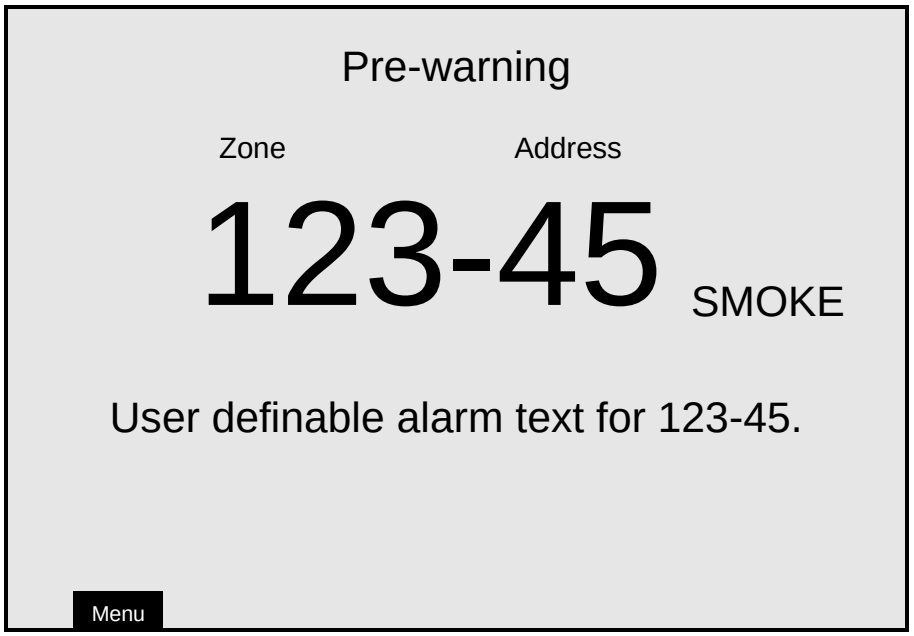
An analog detector will generate a pre-warning for a lower alarm level than the fire alarm level.[18] Pre-warning can be used when an early warning and/or an early action is required (e.g. a "soft" computer shut down). Normal alarm devices (output type "Alarm devices"), routing equipment, etc. will not be activated.

[18] See EBL512 G3 Planning Instructions. Any programmable input can also be used to activate a pre-warning, e.g. for a High Sensitivity Smoke Detector system.

In case of a pre-warning, the following happens:

- The buzzer in the c.i.e. sounds 0.8 sec. each 5th sec. (0.8 / 5 sec.).
- Outputs programmed for pre-warning are activated.[19]
- In the c.i.e. display, a presentation number (zone/address) is shown (for the first pre-warning).
- In the c.i.e. display, a user definable text message (= the alarm text for fire alarm) is shown (if programmed).

Example; pre-warning zone 123, address 45 (within zone 123):



"SMOKE" after the presentation number is automatically added depending on the type of alarm point (i.e. SMOKE, HEAT, MULTI or MCP).

NOTE! The text "Menu" for the soft key "P4" is visible in the display, only if the door in the CU is open.

If more than one pre-warning is activated, the LEDs "Alarms queued" (L6) are blinking and the pre-warnings will be automatically scrolled (each five seconds).
Pre-warnings are automatically reset see chapter "Alarm reset", page 55.

16.2 Fire alarm

The system can handle up to 15360 fire alarms but only 512 fire alarms can be shown in the c.i.e. display. If more than 512 fire alarms

[19] Outputs programmed for General pre-warning and outputs programmed for the activated pre-warning(s).

are activated, no more fire alarms will be shown until one or more of the first 512 fire alarms are reset.

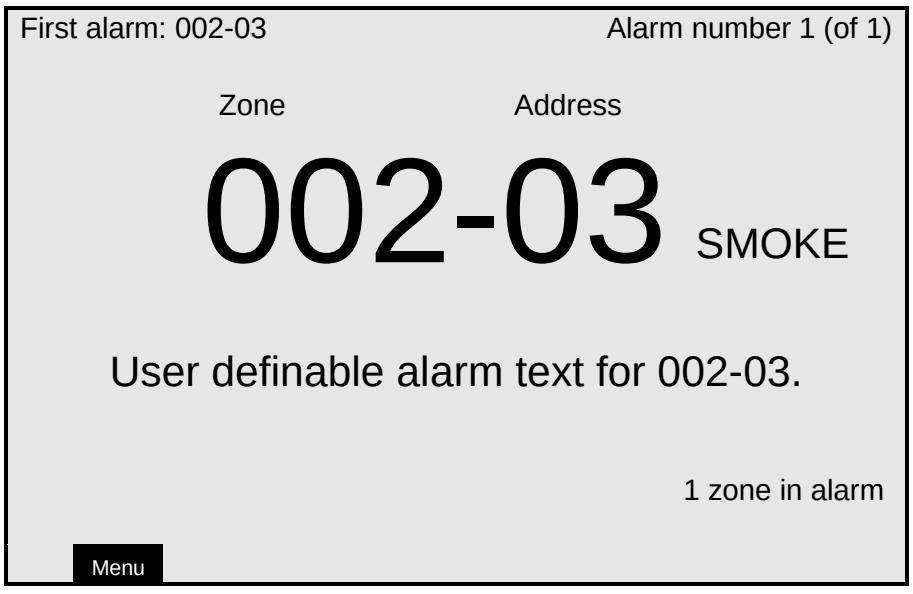
Normally all fire alarms will be presented in all control units (default) but it is possible to have **Selective alarm presentation**, i.e. only fire alarms from selected control units will be presented in the control unit respectively. Set in EBLWin for each control unit.

See also chapter "The information area priority order", page 25. In accordance with the EN54-2 standard, the following happens in case of a fire alarm:

- The buzzer in the c.i.e. sounds 0.4 sec. each 0.4th sec. (0.4 / 0.4 sec.).
- LEDs "Fire" (L1) are blinking (0.4 / 0.4 sec.).
- Output for routing equipment (Fire brigade tx) and outputs type "Routing equipment" are activated.[20]
- Outputs for fire alarm are activated.[21]
- In the c.i.e. display, a presentation number (zone/address) is shown (for the first fire alarm).
- In the c.i.e. display, a user definable text message (alarm text) is shown (if programmed).
- In the c.i.e. display, is also some additional information presented.

One alarm point activating fire alarm.

Example; fire alarm zone 002, address 03 (within zone 002):



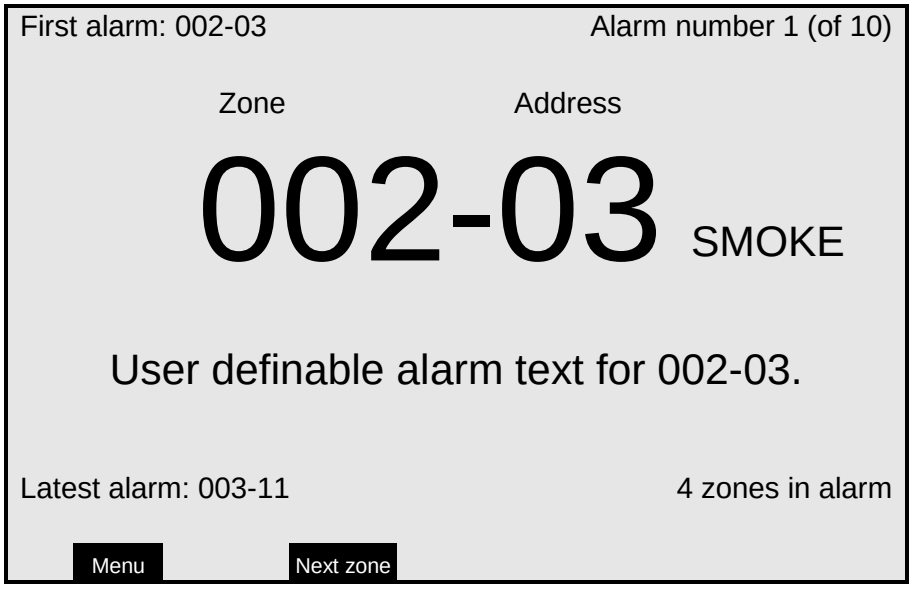
[20] In case of **Selective alarm presentation** only for the selected alarms.

[21] Outputs programmed for General fire alarm and outputs programmed for the activated fire alarm(s).

After the presentation number is automatically added SMOKE, HEAT, MULTI or MCP depending on type of alarm point.

More than one alarm point activating fire alarm.

Example; fire alarm in zone 002, address 03 (within zone 002) and nine other fire alarms (of which the latest alarm is 003-11) in four different zones:



"SMOKE" after the presentation number is automatically added depending on the type of alarm point (i.e. SMOKE, HEAT, MULTI or MCP).

User definable alarm text For each alarm point and zone line input can an individual alarm text be shown (if programmed). Up to 38 characters can be used.

Additional information

First alarm, **Latest alarm**, **Alarm number** and number of **zones in alarm**.

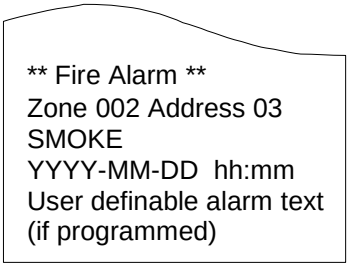
LEDs "**Alarms queued**" (L6) blinking (0.4 / 0.4 sec.) are indicating that more than one fire alarm is activated. To scroll through the alarm points, use the push button "Alarms queued" (P8).

Next zone. Use the soft key "Next zone" (P5) to scroll through the **zones** in alarm.

When scrolling through the zones, the first alarm point activated in the next zone will be shown. The "Next zone" button will be available only if there are alarms in more than one zone.

The first alarm will be automatically displayed again, 20 seconds after the latest time the "Alarms queued" or "Next zone" buttons where used.

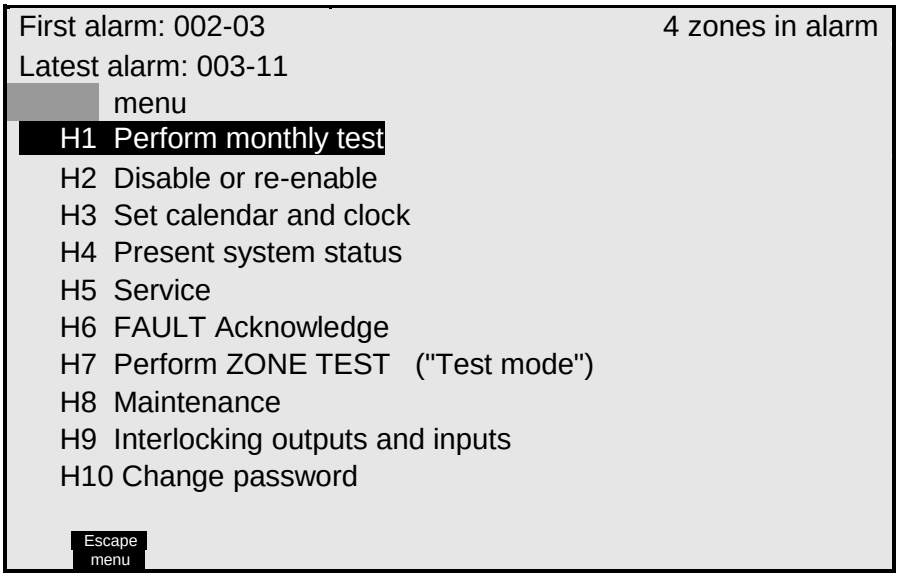
The printer (if available) will print each fire alarm, e.g.:



Reset of the fire alarms, see chapter "Alarm reset", page 55.

16.2.1 Entering the menus during fire alarm

By pressing the soft key "Menu" (P4) during fire alarm, you will get access to the menu system (see Access, page 88). **NOTE!** Access code is required. In this case a part of the display's alarm window will be temporarily suppressed to permit the display of the menu system.



The normal alarm window will be automatically displayed again after the menu system is escaped or 5 minutes after the latest manoeuvre in the menu system.

The alarm window will also be automatically displayed again if any of the soft keys "Esc menu" (P4) or "ESC" is pressed or push button "Alarms queued" (P8).

16.2.2 Acknowledged and Isolated alarm

Acknowledged and **Isolated alarm** is a fire alarm function only used in New Zealand.

Acknowledged alarm

A fire alarm presented in the display can be acknowledged by pressing the soft key "Acknowledge" (P7).

Acknowledged alarms are indicated in the display by "Acknowledged alarm" in the same position as "Heavy smoke" / "Heavy heat", see below. This indication is the only difference between a normal fire alarm and an acknowledged alarm.

Acknowledged alarms have to be reset like normal fire alarms.

Isolated alarm

A normal fire alarm or an acknowledged alarm presented in the display can be isolated as follows:

When the "New Zealand FB Silence switch" (outside switch) is turned OFF (from activated to not activated), any fire alarm and acknowledged alarm will be isolated (=disabled).[22]

Isolated alarms are indicated in the display by "Isolated alarm" in the same position as "Heavy smoke" / "Heavy heat", see below.

Isolated alarms do not activate any control outputs, do not activate the output for routing equipment (Fire brigade tx), do not activate the c.i.e. buzzer and do not activate the LEDs "Fire" (L1) in the c.i.e.

Isolated alarms have to be reset like normal fire alarms.

Isolated alarms also have to be re-enabled via menu H2/B1 before they can activate a new fire alarm again.

16.2.3 Test mode alarm

Regarding Test mode, see chapter "Perform monthly test (H1)", page 90 and chapter "Perform ZONE TEST (Test mode) (H7)", page 131.

When an alarm point in a zone set in test mode is tested, it is presented in the display as a fire alarm but with the information "Test mode" added. If a printer is available the test mode alarm will be printed with the information "(test mode)" added.

The LEDs "Fire" will be blinking (like for a fire alarm) but no outputs will be activated except the fire door outputs. The test mode alarm will be automatically reset after approx. 10 seconds.

16.3 Heavy smoke alarm / Heavy heat alarm

An analog detector can activate a heavy smoke / heat alarm for a higher alarm level[23] than the normal fire alarm level, i.e. a normal fire alarm is already activated by a detector activating a heavy smoke / heat alarm.

Heavy smoke / heat alarm is to confirm heavy or increasing smoke / heat and can be used for special actions, e.g. activation of smoke ventilation, etc.

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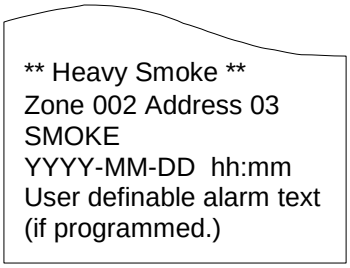
[22] LED **Fault / Disablements** "General disablements" (L10) is indicating that one or more zones / alarm points are isolated (disabled).

[23] See EBL512 G3 Planning Instructions.

The following happens in case of a heavy smoke / heat alarm:

- Outputs programmed for heavy smoke / heat alarm are activated.[24]
- Each heavy smoke / heat alarm is presented with a "title", i.e. "Heavy smoke" or "Heavy heat" will be added to the normal fire alarm information:

The printer (if available) will print each heavy smoke / heat alarm, e.g.:



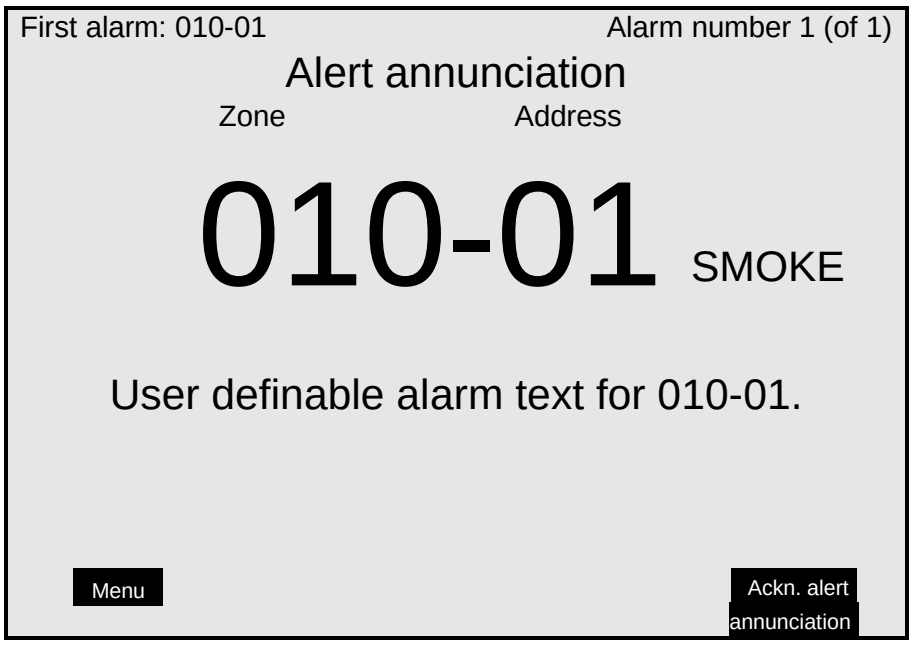
Heavy smoke / heat alarm will be reset when the fire alarm respectively is reset, see chapter "Alarm reset", page 55.

16.4 Alert Annunciation alarm (AA alarm)

When the **AA** function is enabled, indicated by the LED **Routing equipment** "Fire brigade tx delay" (L14), the indications, print-outs, actions etc. are the same as for a normal fire alarm (see above) **except for the c.i.e. output for routing equipment (fire brigade tx), which will <u>not</u> be activated directly.** There will also be a "title", i.e. "Alert annunciation" or "Alert annunciation acknowledged" will be added to the normal fire alarm information. The **AA** alarm has to be <u>acknowledged</u> within an acknowledge time and <u>reset</u> within an

[24] General heavy smoke / heat alarm and individual alarm points / zones.

investigation time, otherwise the output(s) for routing equipment (fire brigade tx) will be activated. See EBL512 G3 Planning Instructions for more information regarding the **AA** function. Acknowledgement and reset of the **AA** alarm can be done on an **AA** unit 1735 / 1736 or an **AA** controller 1740. See also chapter "Alert Annunciation", page 57.



NOTE! The "Ackn. alert annunciation" text is only visible if an AA alarm is activated and not if this key is used for the "Evacuate" function.

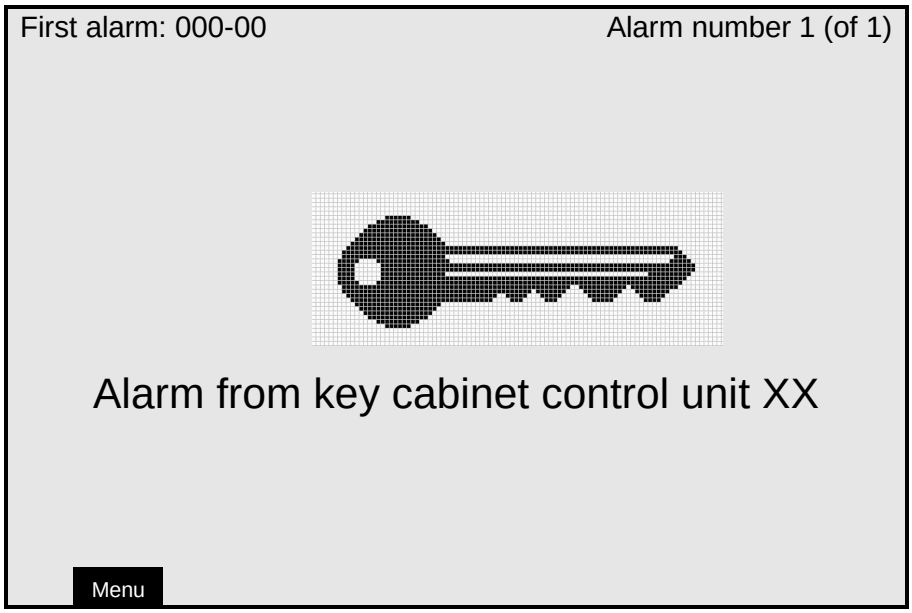
16.5 Key cabinet alarm

The fire brigade uses a key cabinet to store a key to the building.

One programmable input per c.i.e. can be used to connect a key cabinet.

16.5.1 Key cabinet opened before a fire alarm

If the key cabinet is opened before a fire alarm (e.g. if somebody illegally breaks into the key cabinet), a key cabinet alarm will be activated. An example, XX = Control Unit number (00-29):



When printer is available the Key cabinet alarm will be printed like for a normal fire alarm (see above).

Key cabinet alarm is reset like a normal fire alarm, see chapter "Fire alarm reset, page 55.

This alarm will also generate a fault message, see chapter "Key cabinet alarm reset", page 57. It is indicated by LED "Fault" (L9). **NOTE!** The "Fault tx" output(s) will **not** be activated by this fault.

16.5.2 Key cabinet opened in conjunction with a fire alarm

If a normal fire alarm already is activated in the c.i.e. the fire brigade personnel can open the key cabinet without activating any key cabinet alarm or fault.

16.5.2.1 Restoring the key after a fire alarm

When **all** fire alarms in the system are reset (see chapter "Alarm reset", page 55), the key has to be restored into the key cabinet **within 5 minutes**. If not, a fault will be generated, see chapter "Key cabinet alarm reset", page 57.

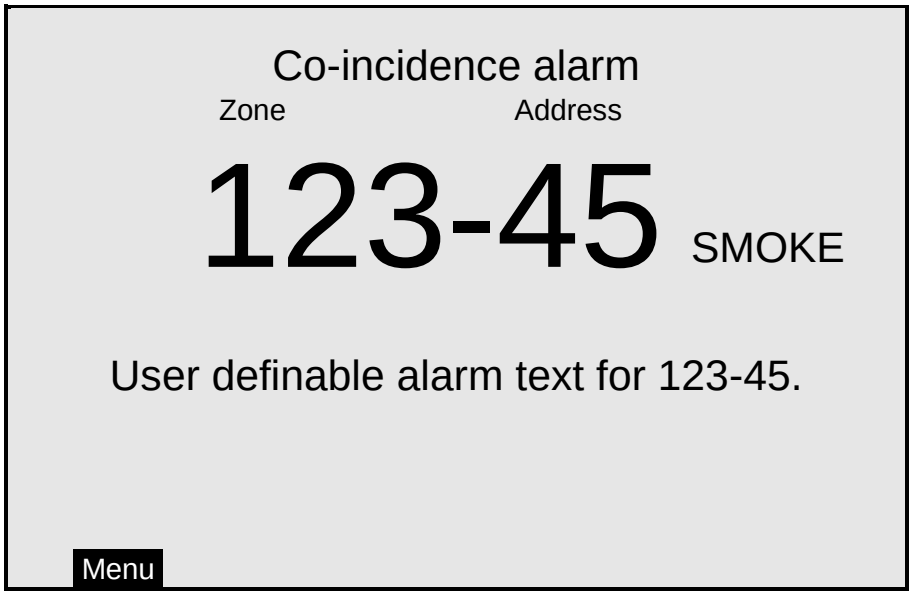
16.6 Co-incidence alarm (2-address / -zone dependence)

The co-incidence alarm function is programmed via EBLWin for the alarm points / zones in question.

When only one **zone** or one **zone / address** (alarm point) is in alarm status, the c.i.e. buzzer sounds (0.8 / 5 sec.) and there is a **Co-incidence alarm** presentation in the display. Note that LEDs "Fire" (L1) are not indicating a co-incidence alarm.

The co-incidence alarm will be automatically **Reset** after 5 minutes (i.e. if the zone / alarm point is no longer in alarm status) or via the "Reset" button (P3). See chapter "Alarm reset", page 55.

An example; Co-incidence alarm zone 123, address 45:



If more than one Co-incidence alarm **not** dependent on each other are activated, the LEDs "Alarms queued" (L6) are blinking and the Co-incidence alarms will be automatically scrolled (each 5th second).

If two or more **zones** or **alarm points** (zone / addresses) dependent on each other are in alarm status at the same time, normal fire alarm (see above) will be activated in the system. The co-incidence alarm function can be turned on / off via a time channel.

16.7 Delayed alarm

Delayed alarm is an option that has to be enabled (via EBLWin) for the alarm point respectively.

The delay time (0-255 sec.) is, for the whole system, set via EBLWin (System Properties, page 1). The delay time will be added at the end of the alarm algorithm when a fire alarm normally would have been activated. For that reason this "extra" delay time should be as short as possible.

The Delayed alarm will be activated when the delay time countdown has started and will be activated until the delay time has run out and a normal fire alarm is activated. No outputs will be activated.

In case of a Delayed alarm, the following happens:

- The buzzer in the c.i.e. sounds 0.8 sec. each 5th sec. (0.8 / 5 sec.).
- In the c.i.e. display, a presentation number (zone/address) is shown (for the first delayed alarm). Also a user definable text message (= the alarm text for fire alarm) is shown (if programmed).

Example; Delayed alarm zone 123, address 45 (within zone 123):

"SMOKE" after the presentation number is automatically added depending on the type of alarm point (i.e. SMOKE, HEAT, MULTI or MCP).

NOTE! The text "Menu" for the soft key "P4" is visible in the display, only if the door in the CU is open.

If more than one Delayed alarm is activated, the LEDs "Alarms queued" (L6) are blinking and the Delayed alarms will be automatically scrolled (each 5th second).
Delayed alarms are automatically reset see chapter "Alarm reset", page 55.

16.8 Alarm Acknowledgement Facility (AAF)

One or more **A**larm Acknowledgement **F**acility **C**ontrols[25] are used in the system.

See EBL512 G3 Planning Instructions chapter "Alarm Acknowledgement Facility (AAF)" for more information regarding the **AAF** function.

During the Acknowledgement Period (10-60 sec.), the following information (a list if many) is shown in the c.i.e. display:

AAF zone zz, activated
dd-mm-yyyy hh:mm

[25] The AAF Control is today available on the Australian market only.

During the Investigation Period (0-3 min.), the following information (a list if many) is shown in the c.i.e. display:

AAF zone zz, investigation in progress
dd-mm-yyyy hh:mm

16.9 Quiet alarm

One or more smoke detectors, via EBLWin programmed for Quiet alarm, have passed the fire alarm level. Quiet alarm is used for fan control (stop or start is depending on the type of fan).

Quiet alarm is normally used in conjunction with one I/O Matrix board 4582, one application board for fan control[26] and one I/O unit for fan control 3361, for control of each fan.

Indications and actions:

Detector LEDs are turned on (i.e. also a connected ext. LED).

LEDs "Fire" (L1) are blinking (0.4 / 0.4 sec.), the buzzer sounds (0.8 / 5 sec.) and there is a **Quiet alarm** presentation (incl. a title "Quiet alarm") in the display:

Quiet alarm
Zone Address
123-45 SMOKE
User definable alarm text for 123-45.
Menu

Programmable outputs for quiet alarm, e.g. 3361 outputs controlling supply air fans and standard fans, i.e. any output with a control expression containing the trigger conditions "Quiet Alarm Zone" or "Quiet Alarm Zone Address".

Quiet Alarms are automatically reset, see page 58.

[26] The Fan control panel 4593 can be used for control of up to eight fans.

17 Alarm reset

17.1 Pre-warning reset

Pre-warning is automatically reset.

17.2 Fire alarm reset

NOTE! The detectors having activated fire alarm shall, after reset, be inspected, tested and replaced when required.

One of the following alarm reset alternatives is valid. This is selected via EBLWin. "All" is default.

17.2.1 All

All activated fire alarms (alarm points / zones) will be reset by pressing "Reset" (P3) once. (This is in accordance with the EN54-2 standard).
NOTE! The push button has to be pressed for min. 0.5 sec.

When all fire alarms are reset, LEDs "Fire" (L1) and "Alarms queued" (L6) are turned off. If there are other conditions (e.g. a fault condition) the corresponding information will be shown (e.g. a fault message), for the priority order see chapter "The information area priority order", page 25.

All outputs (for fire alarm) are reset, i.e. de-activated.

If a key cabinet is installed, the key (to the building) has to be put back into the key cabinet **within 5 minutes**. If not, a fault will be generated and a fault message will be shown in the display, see chapter "Key cabinet alarm reset", page 57.

NOTE!
When "Single" or "Single with automatic disablement" is used, all alarms can be reset by pressing "Reset" (P3) and approx. 0.1 sec. later also press "Enter" and hold them pressed for > 0.5 sec.

17.2.2 Single

Each fire alarm (alarm point / zone) has to be reset one by one.
NOTE! This function is available only if it is set in EBLWin.

Press "Reset" (P3) to reset the fire alarm currently shown in the middle of the display with large digits.
NOTE! The push button has to be pressed for min. 0.5 sec.

Output(s) programmed for that fire alarm (alarm point / zone) will be reset, i.e. de-activated.

If more than one fire alarm is activated (i.e. LEDs "Alarms queued" (L6) are lit) the next fire alarm in the queue will be shown in the middle of the display. It has to be reset the same way as the first one.

When all fire alarms are reset, LEDs "Fire" (L1) and "Alarms queued" (L6) are turned off. If there are other conditions (e.g. a fault condition) the corresponding information will be shown (e.g. a fault message), for the priority order see chapter "The information area priority order", page 25.

All outputs (for fire alarm) are reset, i.e. de-activated.

If a key cabinet is installed, the key (to the building) has to be put back into the key cabinet **within 5 minutes**. If not, a fault will be generated and a fault message will be shown in the display, see chapter "Key cabinet alarm reset", page 57.

17.2.3 Single with automatic disablement

Like "Single reset" but incl. the so called encapsulation function:

Normally when an alarm point or zone having activated fire alarm is reset whilst still is in alarm status, it will activate a new fire alarm within 20 seconds. (This is in accordance with the EN54-2 standard.)

When "Single with automatic disablement" reset is performed, an alarm point or zone, still in alarm status, will not only be **reset** but also **disabled**, i.e. it will not activate a new fire alarm within 20 seconds.
It has to be re-enabled via menu H2/B1 before it can activate a new fire alarm. (This function, set via EBLWin, is a violation to the EN54-2 standard.)

LED **Fault / Disablements** "General disablements" (L10) is indicating one or more disablements in the system.

NOTE!
When "All" or "Single" reset is used, "automatic disablement" (encapsulation function) can be used by pressing "Reset" (P3) and approx. 0.1 sec. later also press "Alarms queued" (P8) and hold them pressed for > 0.5 sec.
The alarm point **or** the whole zone (conventional) currently shown in the middle of display with large digits will be reset and disabled.

17.2.4 Acknowledged and Isolated alarm

Acknowledged alarm and **Isolated alarm** are fire alarm functions only used in New Zealand.

Acknowledged alarm

Acknowledged alarms have to be reset like normal fire alarms.

Isolated alarm

Isolated alarms have to be reset like normal fire alarms.

Isolated alarms also have to be re-enabled via menu H2/B4 or B5 before they can activate a new fire alarm again.

17.2.5 Test mode alarm

Test mode alarm is automatically reset after approx. 10 seconds.

17.3 Heavy smoke / heat alarm reset

If a heavy smoke / heat alarm has been activated, it will be reset at the same time as the corresponding fire alarm is reset. Also the output(s) will be reset, i.e. de-activated.

17.4 Alert Annunciation

Regarding the function, see chapter "Alert Annunciation alarm (AA alarm)", page 49 and EBL512 G3 Planning Instructions, chapter "Alert annunciation". Reset of the **AA** alarm(s) can be done via push button "Reset" on an **AA** unit 1735 / 1736 or an **AA** controller 1740 or in the c.i.e.

NOTE! Reset via an AA unit is possible only during the investigation time and of **AA** alarm(s) only (not normal fire alarms). If more than one **AA** alarm is activated, they will be reset all at a time.

17.5 Key cabinet alarm reset

A key cabinet alarm has to be reset like the normal fire alarms.

After reset a fault message is shown in the display to inform the user that the key cabinet has been opened.

```
FAULT: Key cabinet, control unit xx
yyyy-mm-dd  hh:mm
```

NOTE! The date is for the Australian, New Zealand, Russian and Ukrainian languages shown as **dd-mm-yyyy**.
xx = control unit number (00-29).

If the key cabinet is closed again, the "status" information is changed to: "serviced"

This key cabinet fault message is to be acknowledged the same way as "normal" faults, see chapter "Fault acknowledge", page 77.

When the key cabinet fault is acknowledged, the LED **Fault / Disablements "**General fault" (L9) will be turned off (i.e. if the key cabinet is closed and if there are no other faults in the system).

17.6 Co-incidence alarm

A Co-incidence alarm can be manually reset with the "Reset" button (P3) on the c.i.e. front **or** automatically reset after 5 minutes (i.e. if the alarm point / zone is no longer in alarm state). See also chapter "Co-incidence alarm (2-address / -zone dependence)", page 51.

17.7 Delayed alarm

The Delayed alarm will be automatically reset if the alarm point during the delay time countdown no longer is in alarm state or when a normal fire alarm is activated (i.e. when the delay time has run out).

17.8 Alarm Acknowledgement Facility (AAF) reset

NOTE! The AAF function is used in conjunction with an AAF Control, which today is available on the Australian market only.

The indication in the control unit display, during the Acknowledgement Period (10-60 sec.) and the Investigation Period (0-3 min.) respectively, will automatically disappear when:

- the **AA process** ends because no detector in the **AAF zone** is over the fire alarm level.
- the **AA process** ends up in a fire alarm, which has higher priority. (Regarding Fire alarm reset, see above.)

17.9 Quiet alarm reset

Quiet alarms are non-latching, i.e. they will be automatically reset when the alarm point / zone is no longer above alarm level. Outputs activated by quiet alarm will be de-activated. (In some cases after a programmable delay time.)

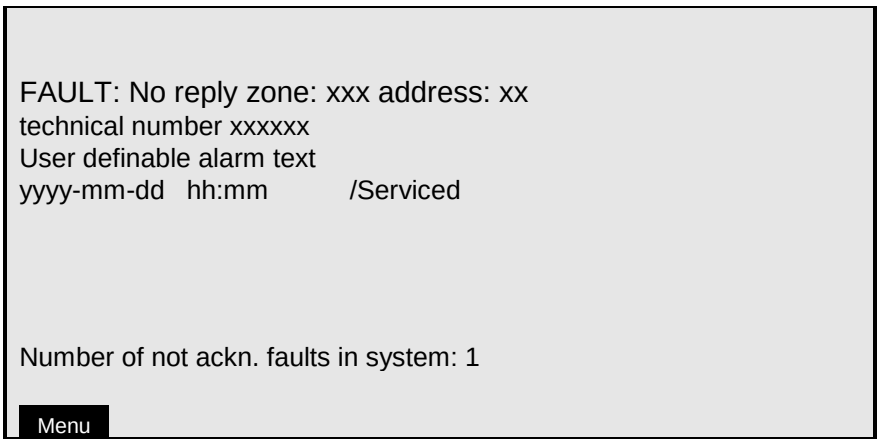
18 Fault

All faults are delayed in order not to generate any unnecessarily faults, e.g. for COM loop and zone line input faults the delay time is approx. 45 seconds. [27]

In case of a fault condition, the following will happen in the control unit:

- The buzzer in the c.i.e. will sound continuously (steady).[28]
- The fault condition output for routing equipment (Fault tx) will be activated.
- Programmable output(s) for general fault will be activated and output(s) for general charge fault might be activated.
- LED **Routing equipment** "Fault tx activated" (L13) will be turned on (indicating that the fault condition output for routing equipment (Fault tx) is activated).
- LED **Fault / Disablements** "General fault" (L9) will be turned on.
- LEDs **Fault / Disablements** "Alarm devices" (L11), "System fault" (L7) and/or **Fault / Disablements** "Fire brigade tx" (L12) might be turned on as well.
- A fault message incl. date, time and status will be shown in the c.i.e. display. If it is an alarm point or zone also the User definable alarm text will be shown.

Example; fault message:


FAULT: No reply zone: xxx address: xx
technical number xxxxxx
User definable alarm text
yyyy-mm-dd hh:mm /Serviced
Number of not ackn. faults in system: 1
Menu

NOTE!
When the Russian, Ukraine, Australian or the New Zealand language is selected the date is shown as follows: **dd-mm-yyyy**.

[27] Some units may also have an internal delay time, which makes the delay time even longer, e.g. the Multipurpose I/O unit 3361 has an internal delay time of 30 seconds, which results in 45+30=75 seconds delay time in total.

[28] The buzzer in the control unit can be suppressed for faults generated in other control units. "Suppressed buzzer during fault" is set via EBLWin.

- In the c.i.e. display can up to three fault messages be shown simultaneously. In the display, down to the left, is displayed the number of not acknowledged faults.
- If a fault has been corrected (serviced) before it has been acknowledged, the status information is "/Serviced", see above.
- Fire alarm presentation has higher priority than the fault messages, however during fire alarm presentation the faults can be shown via the menu system, see page 47.
  NOTE! Two faults also have their separate information texts shown close to the soft key area, also during fire alarm: **`Extinguishing fault`** and **`Extinguishing wire fault`**.

Faults (normally latched[29]) have to be acknowledged, which is done via menu H6 (see page 129). This menu is a list of all faults in the system:

not corrected / serviced and not acknowledged fault

not corrected / serviced but acknowledged fault (/Acknowledged)

corrected / serviced but not acknowledged fault (/Serviced)

If a fault cannot be corrected, it is important to contact service personnel / engineer immediately.

NOTE!

As a reminder, faults (and disablements) are indicated by a 2-sec. beep when an open c.i.e. door is being closed.

[29] Can via EBLWin be set to be "not latched".

18.1 Fault messages

Below follows a list of all fault messages, in alphabetical order. There is also an explanation to each fault.

`Checksum fault in downloaded data. Control unit will now restart`
A fault in the downloaded Site Specific Data (SSD). After the restart a new fault will be generated: FAULT: Site Specific Data (SSD), control unit xx. A new SSD download will probably solve the problem.

`FAULT: 24V for external equipment output x, control unit xx`
x = Power supply output 1-4 (J3:5-12). xx = 00-29. Check fuse F9, F10, F11 and F12 respectively on the Main board 5010 in control unit no. xx. Fuse: T**4A** L 250V (TR5).

`FAULT: 24V for routing equipment, control unit xx`
Power supply output 0 (J3:3-4). xx = 00-29. Check fuse F8 on the main board 5010 in control unit no. xx. Also indicated by LED **Fault / Disablement** "Fire brigade tx" (L12) blinking. Fuse: T**500mA** L 250V (TR5).

`FAULT: 24V out, output unit xxxxxx`
This is valid for the external power supply 3366 connected on the COM loop. The output might be turned off or the current output limit (4A) is exceeded.

`FAULT: Alert annunciation unit xx, control unit xx`
1735 / 1736. (Alert Annunciation Unit - AAU.) The AAU unit xx, connected to control unit no. xx, is programmed as another type in the SSD or a fault in the unit.

`FAULT: Battery not connected, control unit xx`

- Battery voltage is below 18.9 V.
- Batteries (2 x 12 V) are missing or not connected correctly.
- Fuse F2 on the Main board 5010 is blown.
- Other battery fuse is blown.

This check is done every 14th minute but when the fault is generated the check is done every 30th sec. Fuse: T6.3A H 250V (5x20 mm ceramic).

`FAULT: Battery, technical number xxxxxx`

The charging function in the external power supply 3366 connected on the COM loop is not OK.

- Batteries (2 x 12 V) are missing or not connected correctly.
- The p.c.b. is faulty and has to be replaced.

`FAULT: Charger, control unit xx`

The battery charging function is not OK. The main board 5010 may have to be replaced.

`FAULT: Charging external power supply, control unit xx`

The fault is to be found in the external power supply equipment, which has a charging fault output connected to a programmable input in control unit no. xx.

`FAULT: Charging, output unit xxxxxx`

The fault is to be found in the external power supply unit 3366. Charging is stopped due to too high output current.

`FAULT: Checksum MMI program, control unit xx`

A fault in the control unit xx MMI board 5011 software. LED "System fault" is turned on. This is a very serious fault. Call for service personnel/engineer immediately.

`FAULT: Checksum system program, control unit xx`

A fault in the control unit xx Main board 5010 software. LED

"System fault" is turned on. This is a very serious fault. Call for service personnel/engineer immediately.

`FAULT: CU xx has no contact with control unit xx, network x`

network x = network 0 or network 1
Network **0**: In a **redundant network**, the communication is normally on Network 0 only.
Network **1**: In a **redundant network** is Network 1normally in a supervised quiescent state until there is a fault (cut-off or short circuit) on Network 0.

- Check the TLON network cables / connections. (Also for mixed Network 0 and Network 1 cables.)
- Faulty TLON connection board 1590 / 5090.
- The control unit has no power.
- Can be shown in conjunction with new S/W download.

`FAULT: Cut-off loop x, control unit xx SCInn <-> SCInn`

This fault is indicating a cut-off (break) on COM loop x or the COM loop voltage is too low at the end of the loop.

`SCI n <->SCI n` describes between which **S**hort **C**ircuit **I**solators the cut-off is located.
n = A, B, 0, 1, 2, 3, 4, 5, 6 .....63. A & B is the built-in isolator in the EBL512 G3 A-direction and B-direction respectively.

If no SCI is used the information will always be: `SCI A <-> SCI B.`
If only one SCI is used (e.g. 4313 no. 0), the information will be:
`SCI A <-> SCI 0` or `SCI 0 <-> SCI B`
...and so on.

If it is a single break (cut-off) on the loop there will be no other fault messages.

If there are several breaks on the loop the message shows the last isolator before the break in the A-direction (incl. the following isolator). There will also be a "FAULT: No reply ….." message for each unit that EBL512 G3 cannot find and "FAULT: Multiple faults …".

NOTE! Each 10th minute a new attempt is made to communicate in one direction only.
When all breaks are repaired (corrected) the communication automatically returns to communicate in one direction only.

FAULT: Earth fault (minus), control unit xx FAULT: Earth fault (plus), control unit xx
Earth fault is detected in control unit no. xx. System voltage is normally 24 V DC. +24 V to earth is normally 12.5 V. 0 V to earth is normally 11.5 V. Voltage to earth < 3.4 V = Earth fault (minus). Voltage to earth > 18.3 V = Earth fault (plus). Check all cables (for damage, etc.). The function of the control unit cannot be guaranteed. Call for service personnel/engineer.

FAULT: Earth fault, output unit xxxxxx
Check all cables (for damage, etc.) connected to the unit.

FAULT: Expansion board x, control unit xx
This is valid for the exp. boards 4580, 4581 & 4583, i.e. no. x, mounted in the control unit no. xx. There is some internal fault on the board, which has to be replaced.

FAULT: Expansion board x, loop x, control unit xx
This is valid for the I/O Matrix board (4582) no. x, connected on COM loop x (0-3) in the control unit no. xx. There is some internal fault on the board, which has to be replaced.

FAULT: External fuses, control unit xx
The fault is to be found in the external power supply equipment, which has a fuse fault output connected to a programmable input in control unit no. xx.

FAULT: External power supply, control unit xx
The fault is to be found in the external power supply equipment, which has a fault output connected to a programmable input in control unit xx.

FAULT: External presentation unit xx, control unit xx
1728 (Ext. Presentation Unit - EPU.) The EPU xx, connected to control unit no. xx, is programmed as another type in the SSD or a fault in the unit.

FAULT: Extinguishing system, control unit xx
The fault is to be found in the extinguishing system, which has a fault output connected to a programmable supervised input in the EBL512 G3 system, in control unit no. xx. Also check the input connections. **NOTE!** Close to the soft key area in the display there will be an additional information text: Extinguishing fault.

FAULT: Factory settings, control unit xx
The factory settings have been "changed", in control unit no. xx, e.g. because of some external disturbance. The main board has to be replaced.

FAULT: Fan, technical number xxxxxx
The LED "Fault" is lit on a fan control module connected to control unit xx. Fan no. xx has been activated but the corresponding I/O unit 3361 input has not been activated within the programmed time. Check the fan and the cables / connections. **NOTE!** In the Australian and New Zealand conventions this fault is "not latched" irrespective of if all other faults are "latched".

FAULT: Fault warning routing equipment, control unit xx
The fault is to be found in the Fault warning routing equipment. A routing equipment fault output is connected to a programmable supervised input in the EBL512 G3 system, in control unit no. xx. Check the input connections as well. (Normally used for German routing equipment connected to an expansion board 4583 input 0.)

FAULT: FB silence switch, control unit xx

Only valid in the New Zealand convention.
New Zealand FB Silence switch ("outside switch") is turned on, in control unit no. xx, i.e. from not activated to activated state.

FAULT: Fire brigade panel xx, control unit xx
FBP=1826 / 1828 (Ext. Fire Brigade Panel) The ext. FBP xx, connected to control unit no. xx, is programmed as another type in the SSD or a fault in the unit.

FAULT: Fuse on COM-loop x, control unit xx
Blown fuse F15 (Loop 0), F16 (Loop 1), F17 (Loop 2) or F14 (Loop 3) on the main board 5010, in control unit no. xx. Fuse T**1.6A** L 250V (TR5). **NOTE!** The fuse shall **not** be replaced. The main board 5010 shall be replaced, since more components are broken as well.

FAULT: High current consumption, control unit xx
The control unit current consumption is > 3.3A (> 6.3A in alarm state) and because of this, the battery charging is turned off and will be so until the current consumption has decreased to ≤ 3.3A (≤ 6.3 A) again.

FAULT: Interlocking input AAA-PP
An interlocking input is not activated within the time set for fault activation (5-255 seconds). The time is counted from the activation of the output in the interlocking combination, area AAA / point PP.

FAULT: Internal short circuit, COM-loop x control unit xx
Short-circuit on the connection (ribbon cable) to or between the expansion boards (458x) in the control unit xx (EBL512 G3).

FAULT: Key cabinet, control unit xx
The key cabinet has been opened without a prior fire alarm (i.e. if somebody has opened the key cabinet illegally). or The key cabinet has not been closed within 5 minutes after reset of all

fire alarms in the system.

FAULT: L-C mixed COM-loop x, control unit xx
The two wires L (SA) and C (SB) for COM-loop no. x (0-3), in control unit no. xx, have been mixed (alternated). Check / correct the wire connections.

FAULT: Loop unit zone: xxx address: xx technical number xxxxxx
The unit (not a detector) is **not** all right, i.e. the unit is out of order / faulty. The unit has to be replaced.

FAULT: Low battery capacity, control unit xx
Battery (in control unit no. xx) internal resistance > 0.6 Ω. • The battery might be too old. • Cables, fuses etc. for externally placed batteries might cause a voltage drop. • Check / adjust the rectifier (power supply) voltage (24 V DC). • Check the charging voltage over the battery respectively (13.5-13.8 depending on the actual charging step). • Check the voltage over a disconnected battery (fully charged ≥ 13 V). • **In the New Zealand convention only**: The battery charging is turned off 60 minutes every 24th hour. A battery voltage < 24.4 V during these 60 minutes will generate a fault. If a fault is generated it will automatically be **Serviced** after these 60 minutes. The battery should normally be replaced. **NOTE!** The battery check is performed every 12th hour, i.e. it can take up to 12 hours until the fault status will be "corrected".

FAULT: Low voltage, control unit xx
System voltage < 21 V DC, in control unit no. xx. Check the power supply (rectifier) 5037 output voltage, which shall be 24 V DC. Replace 5037 if required.

FAULT: Low voltage, output unit xxxxxx
System voltage < 21 V DC in the external power supply unit 3366. Check the power supply (rectifier) 1537 output voltage, which shall be 24 V DC. Replace 1537 if required.

FAULT: Mains, control unit xx
The fault is activated 1-300 minutes[30] after: • Loss of mains, i.e. no 230 V AC • Blown mains fuse. • Blown fuse F1 on main board 5010. Fuse T**6.3A** H 250V (5x20 mm ceramic).

FAULT: Mains, external power supply, control unit xx
This is valid for external power supply equipment, which has a fault output connected to a programmable **input** in the EBL512 G3 system. The fault is activated 1-300 minutes[30] after the **input** is activated. • Loss of mains, i.e. no 230 V AC to the ext. power supply equipment. • Blown mains fuse. • Check the programmable input connections.

FAULT: Mains, output unit xxxxxx
This is valid for the external power supply unit 3366 and the addressable 2 voltage outputs unit 3364, connected on the COM loop. The fault is activated after 1-300 minutes).[30] after: • Loss of mains, i.e. no 230 V AC to the **3366** unit. • Blown mains fuse. • Fuse F1 blown on the 3366 unit's charger board 3367. Fuse T**5A** L (5x20 mm). • 3364 unit: o Terminal no. 8 (/Mains OK) not connected to the 3366 unit (J7:4) or 0 V, see drawing 512 G3 - 38. o "no mains signal" from the 3366 unit.

FAULT: Multiple faults, COM-loop x,

[30] The time is programmable via EBLWin. Max. 30 min. according to the EN54-2 standard. Default value depending convention.

control unit xx
Break (cut-off) / short-circuit in more than one segment on the COM loop, in control unit no. xx.

FAULT: Network cables mixed, control unit xx
In a redundant TLON Network the Network 0 cables and Network 1 cables are mixed. Check the network installation / connections.

FAULT: No connection with MMI board, control unit xx
This fault message cannot be shown in the control unit's display, only via EBLWin, via Web-server and in other control units in the system. Fault in the MMI board 5011 software or the MMI board. Check the cable between the boards. This is a very serious fault. Call for service personnel/engineer immediately.

FAULT: No reply, expansion board x, control unit xx
Valid for the 8 zones exp. board 4580, the 8 relays exp. board 4581 and the Inputs and outputs exp. board 4583, mounted in the control unit no. xx. • EBL512 G3 cannot communicate with the board. Check / change the address. Check the cables / connections. • Check if the Main board fuse F13 is broken. Fuse: T**4A** L 250V (TR5).

FAULT: No reply expansion board x loop x control unit xx
This is valid for the I/O Matrix board (4582) no. x, connected on COM loop x in the control unit no. xx. • Check the board's address, i.e. the I/O Matrix board no. (Jumpers JP1, JP2 and JP3 on the board). • Check if the board is disconnected from the loop.

FAULT: No reply, alert annunciation unit xx, control unit xx
FAULT: No reply, external presentation unit

xx, control unit xx
FAULT: No reply, fire brigade panel xx, control unit xx
Alert Annunciation Unit 1735 / 1736. External Presentation Unit 1728 External Fire Brigade Panel 1826 / 1828 • The contact with the unit is interrupted. Check the cable, all connections, etc. Is correct / complete SSD downloaded (via EBLWin)? Check the address and SW mode settings. • Check if the Main board fuse F19 is broken. Fuse: T**1.6A** L 250V (TR5). • If there is a program memory fault in the unit, there will be a fault message, shown briefly in the unit's display during start up: **"Memory fault in program area (n)"** (n=1 or 2). The unit will not work.

FAULT: No reply zone: xxx address: xx technical number xxxxxx
The unit cannot be found by the control unit. • Check the unit's COM loop address (with the programming tool 3314). • Check the downloaded site specific data (SSD). • The unit might be faulty. • The detector might be removed from its base. • There might be a double break or short-circuit on the COM loop.

FAULT: Printer, control unit xx
This is valid for an EBL512 G3, type 5000 with printer. Control unit no. xx. • Faulty printer • Printer not correctly connected. • No paper. • Printer selected in EBLWin but no printer mounted in the c.i.e. and vice versa.

FAULT: Read/write site data (SSW), control unit xx
SSW = the data that is changed during operation, i.e. week average sensor values, access codes, calibration values and event logs, in control unit no. xx.

- If the C.U. was made powerless (i.e. mains and battery disconnected) without first doing a Safe shut down of control unit via menu H8/S6 (see page 141), this fault might be generated when the C.U. is powered again. After fault acknowledge the SSW will get default values and the fault will be corrected (serviced). Supervised outputs have to be calibrated via menu H5/A1.
- Some external influence has caused a fault in the SSW. This is very serious. Call for service personnel/engineer.

`FAULT: Restart control unit nn, code xx, address yyyyyyyyyy`

A restart has occurred in control unit no. nn.

SSD and S/W download will automatically be followed by a restart. Also, you can manually do a restart, see chapter "Restart", page 84.

The following restart codes are because of some external disturbance and are not normal, i.e. call for service personnel / engineer:

xx=01: Watchdog Reset.

xx=02: Accidental jump to reset vector.

xx=04-19: Unexpected interrupt.

xx=20: S/W monitoring fault

xx=13 will always be followed by an address (yyy....), which is important to write down.

yy…y = memory address (before restart). Write down the address and inform the service personnel/engineer.

`FAULT: Sensor zone: xxx address: xx technical number xxxxxx`

The analog smoke, heat or multi detector is faulty. The detector's built-in self verification function has reported a fault. The detector has to be replaced.

`FAULT: Short circuit loop x, control unit xx, SCI`**`nn`**`<->SCI`**`nn`**

`SCI` **`nn`** `<-> SCI` **`nn`** describes between which **S**hort **C**ircuit **I**solators the short-circuit is located.

nn = A, B, 00, 01, 02, 03, 04, 05, 06, 07 - - 63. A & B is the built-in isolator in the EBL512 G3 c.i.e. A-direction and B-direction respectively.

If no SCI is used the information will always be:

SCI **A** <-> SCI **B.**
If one SCI (no. 0) is used, the information will be:
SCI **A** <-> SCI**00**
or
SCI**00** <-> SCI **B**
...and so on.

There will also be a "FAULT: No reply ….." message for each unit not found by the c.i.e.

If there are several short-circuits on the loop the message shows the isolator just before the break in the A-direction (incl. the following isolator). There will also be shown "FAULT: Multiple faults …".

NOTE! Each 10th minute a check is performed if all short-circuits are corrected (repaired). If so, the communication automatically returns to communicate in the A-direction only.[31]

FAULT: Site specific data (SSD), control unit xx
The Site Specific Data (SSD) in control unit no. xx is not downloaded correctly (a checksum fault, etc.). A new SSD download (via EBLWin) is required.

FAULT: Site specific data, alert annunciation unit xx, CU xx
FAULT: Site specific data, external presentation unit xx, CU xx
FAULT: Site specific data, fire brigade panel xx, control unit xx
Alert Annunciation Unit 1735 / 1736 . Ext. Presentation Unit 1728. Ext. Fire Brigade Panel 1826 / 1828. There is no SSD (Site Specific Data) downloaded to the unit or something is wrong in the downloaded SSD.

FAULT: Supervised input x expansion board x, control unit xx

[31] **NOTE!** The fault has to be acknowledged, i.e. and it can last up to 10 minutes after the acknowledgement before the communication returns to communicate in the A-direction only.

A fault on the supervised input x on the expansion board 4583 with address x, in control unit no. xx.
Check the cables / connections (cut-off or short-circuit).

`FAULT: Supervised output x, control unit xx`

If the output is programmed for sounders (type "Alarm devices"), it is also indicated by LED **Fault / Disablements** "Alarm devices" (L11) blinking.
If the output is programmed for fire brigade tx (type "Routing equipment"), it is also indicated by LED **Fault / Disablements** "Fire brigade tx" (L12) blinking.

If the output is programmed for an extinguishing system (type "Extinguishing"), there will be an additional information text close to the soft key area in the display: `Extinguishing wire fault.`

x=0 (S0): Short circuit/break on the connected cable/ equipment and/or blown fuse F4 on the main board 5010.
x=1 (S1): Short circuit/break on the connected cable/ equipment and/or blown fuse F5 on the main board 5010.
x=2 (S2): Short circuit/break on the connected cable/ equipment and/or blown fuse F6 on the main board 5010.
x=3 (S3): Short circuit/break on the connected cable/ equipment and/or blown fuse F7 on the main board 5010.
Fuse T**500mA** L 250V (TR5).

- Calibration not performed via menu H5/A1.
- Connected equipment might be "stolen".
- Resistor(s) missing or not correct value. (1-5 resistors 33K)

NOTE! The calibrated value has to be in the range 4K7-50K.

`FAULT: Supervised output x expansion board x, control unit xx`

A fault on the supervised output x on the expansion board 4583 with address x, in control unit no. xx.

If the output is programmed for sounders (type Alarm devices), it is also indicated by LED **Fault / Disablements** "Alarm devices" (L11) blinking.
If the output is programmed for fire brigade tx (type Routing equipment), it is also indicated by LED **Fault / Disablements** "Fire brigade tx" (L12) blinking.

- Calibration not performed via menu H5/A1.
- Short-circuit / break on the connected cable / equipment.
- Blown fuse F1 (Output 0) or F2 (Output 1) on the 4583 board. Fuse T**200mA** L 250V (TR5).

- Connected equipment might be "missing".
- End-of-line resistor(s) missing or not correct value, 1-5 resistors (33K).

NOTE! The calibrated value has to be in the range 4K7-50K.

```
FAULT: Supervised output x,
technical number xxxxxx
```

This fault message is valid for a COM loop output unit 3364 output.

If the output is programmed for sounders (type Alarm devices), it is also indicated by LED **Fault / Disablements** "Alarm devices" (L11) blinking.
If the output is programmed for fire brigade tx (type Routing equipment), it is also indicated by LED **Fault / Disablements** "Fire brigade tx" (L12) blinking.

- Calibration not performed via menu H5/A1.
- Short-circuit / break on the connected cable / equipment.
- Connected equipment might be "stolen".
- End-of-line capacitor(s) missing or not correct value, 1-5 capacitors (470 nF).

NOTE! The calibrated value has to be in the range 470 nF – 5 x 470 nF (2350 nF).

```
FAULT: Temperature sensor, control unit xx
```

The sensor is not correctly connected or is missing.

```
FAULT: TLON-board (Network 0),
control unit xx
```

```
FAULT: TLON-board (Network 1),
control unit xx
```

TLON connection board 5090.

No communication / connection with the TLON network. The board for Network 0 or 1 in control unit no. xx has to be replaced.

```
FAULT: Wrong information, control unit xx
```

Can be shown in conjunction with new software download and/or when commissioning a system. This fault can be generated due to a bad TLON network, i.e. communication problems.
One or more control units might have data stored that is not the same in all control units. If a control unit restarts in conjunction with this fault, a synchronization will start automatically, otherwise a synchronization has to be started via menu H8/S8 (or via EBLWin).

NOTE! It is important that all control units that are supposed to exist (SSD downloaded via EBLWin) are running and are connected to the TLON network. The TLON network programming has to be done. It will take 90-120 seconds until this fault is corrected.

```
FAULT: Wrong type expansion board x
loop x control unit xx
```

This is valid for the I/O Matrix board 4582 no. x connected on COM loop x in the control unit no. xx.

Check the board type, set with jumpers JP4 and JP5 on the I/O Matrix board. The type should be the same as programmed via EBLWin.

```
FAULT: Wrong type, expansion board x,
control unit xx
```

Valid for the 8 zones exp. board 4580, the 8 relay outputs exp. board 4581 and the Inputs and outputs exp. board 4583, mounted in control unit no. xx.

Check the type of board, which should be the same as programmed via EBLWin.

```
FAULT: Wrong type of unit zone: xxx
address: xx
technical number xxxxxx
```

Check the type of unit, which should be the same as programmed via EBLWin.

```
FAULT: Zone line input, Zone xxx Address xx
CU xx expansion board x input x
```

Valid for the 8 zones exp. board 4580 zone line input x (xxx-xx = zone – address). The board is mounted in control unit xx.
Break on the zone line, wrong / no end-of-line device / short-circuit (if not programmed for fire alarm at short-circuit).

```
FAULT: Zone line input, zone: xxx address:
xx technical number xxxxxx
```

Valid for the Multipurpose I/O unit 3361 monitored zone line input Z.
Break on the zone line or wrong / no end-of-line capacitor (470 nF) or short-circuit (if not programmed for fire alarm at short-circuit).

No contact with main board
Shown only in the affected control unit. • Check that "MMI board" is selected in the SSD (EBLWin, Control unit properties). • Fault in the Main board 5010 software or hardware. Check the cable between the Main board and MMI board. This is a very serious fault. Call for service personnel/engineer immediately. • In conjunction with SSD download: Erase the SSD in the control unit and download the SSD again.

(External fault; User programmable text)
Programmable input is connected to any external equipment's fault output. User definable fault message (≤ 40 characters) has to be programmed via EBLWin. Note, The prefix "**FAULT:**" will **not** be automatically added.

18.2 Fault acknowledge

The LEDs **Routing equipment** "Fault tx activated" (L13) and **Fault / Disablements** "General fault" (L9) are turned on[32].
(LEDs **Fault / Disablements** "Alarm devices" (L11), "System fault" (L7) and/or **Fault / Disablements** "Fire brigade tx" (L12) might be turned on as well.

Output(s) for routing equipment (Fault tx) is (are) activated.

Output(s) for general fault is (are) activated.

Output(s) for general charge fault might be activated.

One or more fault messages incl. date and time are shown in the control unit display.

If **Fault latching** is selected in EBLWin (default), after the time might be shown `"serviced"` = the fault is already serviced / corrected.

Example: Fault messages shown in the control unit display:

```
FAULT: No reply zone: 123 address: 01
technical number 000025
2009-10-02   15:22          serviced

FAULT: No reply zone: 123 address: 03
technical number 000027
2009-10-06   09:25

FAULT: No reply zone: 234 address: 01
technical number 002112
2009-11-06   15:25


Number of not ackn. faults in system: 5
Extinguishing fault                    Extinguishing wire fault
```

[33]

- Login, according to chapter "Access", page 88.
- Use **menu H6** (access level 2B) for fault acknowledge, see chapter "FAULT Acknowledge (H6)", page 129. Menu H6 is a list showing a maximum of 300 faults (not acknowledged faults and/or acknowledged but not serviced / corrected faults).

---

[32] Indicating that output for routing equipment (Fault tx) is activated.

[33] Only valid for the VdS convention: If one of the faults is **`FAULT: Extinguishing system, control unit xx`**, also the information text **`Extinguishing fault`** will be shown.
If one of the faults is **`FAULT: Supervised output x, control unit xx`** and the output type is "Extinguishing", also the information text **`Extinguishing wire fault`** will be shown. The information texts are shown also during a fire alarm.

- All faults have to be individually acknowledged one by one by the key pad button ↵ . Use ▲ or ▼ to scroll.
- If a fault has been corrected before it has been acknowledged, the text `"serviced"` is added after the time. It still has to be acknowledged.
- When a fault is corrected / serviced and acknowledged, it will disappear from the list (H6).
- When **all** faults have been acknowledged, output(s) for routing equipment (Fault tx) is (are) reset (i.e. the LED **Routing equipment** "Fault tx activated" (L13) will be turned off). [34]
- As long as there are faults (i.e. not acknowledged faults and/or acknowledged but not corrected faults) the LED **Fault / Disablements** "General fault" (L9) will be lit and general fault (and maybe general charge fault) output(s) are activated.
- Faults, corrected faults and acknowledged faults are shown in the General event log (menu H4/U6).

[34] In the Australian and New Zealand conventions the LED "L13" is turned on and the output(s) for routing equipment (Fault tx) is (are) activated until there are no faults in the system.

19 Commissioning an installation

Before you connect the power supply to a control unit, all other cable connections shall be made. Check once more that they are correct.

A tip! Measure the resistance of each loop wire (L & C respectively) before turning on the power. Check that the L-wire (SA) that goes out on terminal J5:1 comes back at terminal J5:3 and so on. If the loop has short circuit isolators, only the C-wire (SB) can be measured. Also measure the resistance between the loop wires and 24V, 0V and Earth (J2:1, 2 and 3). The resistance should be very high (mega ohm).

19.1 Single Control Unit

1. Take away the rectifier fuse (F1) and the battery fuse (F2) on the main board 5010. **NOTE!** In a single / standalone control unit there shall be no TLON connection board (5090) plugged on the main board.
2. Connect the batteries to the main board 5010, terminal block "J2". **NOTE!** There shall be an in-line-fuse (F) on the cable between the batteries, see drawing 512 G3 – 21.
   CAUTION: RISK OF EXPLOSION IF BATTERY IS REPLACED BY INCORRECT TYPE. DISPOSE USED BATTERIES ACCORDING TO THE INSTRUCTIONS.
3. Connect the rectifier to the mains (230 V AC).[35]
   NOTE! It shall be connected to a household removable fuse for the fire alarm c.i.e. only, via a two-way circuit breaker.[36]
   The mains cable shall be securely clamped and the wires shall be as short as possible. The mains safety earth (ground) shall, however, be longer than the other wires, to ensure that it is the last to be disconnected if the mains cable clamp should fail.
   The lid protecting the rectifier screw terminals shall after the installation be correctly applied.
4. First put back the battery fuse (F2) and then the rectifier fuse (F1) on the main board 5010.
5. LED "Operation" (L5) indicate that the 24 V DC power supply is okay (rectifier and/or battery).
6. The c.i.e. will do a restart (see chapter "Restart", page 84).
7. The site specific data (SSD) – created in EBLWin – can now be downloaded, see Planning Instructions MEW01551.
8. See also chapter "Calibration of supervised outputs (H5/A1)", page 119.

[35] Cable tie shall be mounted to keep the mains wires well separated from the 24 V DC wires.

[36] National regulations have always to be followed.

19.2 Control Units in a TLON network

The EBL512 G3 system can be build up as a single TLON Network or as a redundant TLON Network, i.e. two networks.

In the **single TLON Network**, one TLON connection board (5090) has to be plugged in each control unit (Network no. 0) whereas in the **redundant TLON Network**, two connection boards (5090) have to be plugged in each control unit.

The redundant TLON Network supports full functionality also in case of a network fault, i.e. open circuit or short circuit in one of the TLON networks.

Network no. 0
When the 5090 board is on place and the network cables are connected[37], **for each control unit**, do as for a single control unit, see 1-6 in chapter 19.1 above.

When all control units are powered, the TLON network installation (see below) has to take place **before** the site specific data (SSD) can be downloaded, see Planning Instructions MEW01551.

If you know that one or more of the control units are to be started-up later, do as follows:
- In EBLWin create SSD only for the control units that shall be connected now. Wait to download the SSD until the TLON Network installation is ready.
- In TLON Manager, do the TLON Network programming for the project, i.e. only the control units that shall be connected now.
- When the TLON Network installation is ready – see below – download the SSD.

Later, when one or more control units shall be added to the TLON Network:
- Open the project in **TLON Manager**, add the new control unit(s) and install (download) according to the separate TLON network Operating Instructions MEW01361.
- Open the SSD in EBLWin and add the new control unit(s) and download the SSD to all control units.

19.2.1 TLON network installation

A project (a system with two or more control units) is created in the PC program **TLON Manager** (or has been created earlier). A PC is connected to the modular connector "J10" (Network no. 0) in a control unit (main board 5010). Open the project in **TLON Manager** and install (download) the project, see separate TLON network Operating Instructions MEW01361.

[37] The TLON connection board is mounted on the main board 5010. Network cable connections are made on the main board 5010, terminal block "J4".

In a redundant network two Projects have to be created and installed. The Projects have to be identical but with different Project names. One project has to be installed for Network no. 0 and one has to be installed for Network no. 1.

If a redundant TLON Network shall be used, a PC is connected to the modular connector "J11" (Network no. 1) and the same procedure as for Network no. 0 is done for Network no. 1.

NOTE! After the TLON Network installation (download) it is highly recommended to restart the control units.

19.3 Add a Control Unit in a TLON network

When adding a new control unit to a "running" installation you have to have the same software (S/W) version in all control units. Often the new control unit has a newer version than the existing control units. Normally the latest version is the best to use, i.e. the control units in the "running" installation have to be upgraded. As an alternative, it is possible to download an earlier S/W version in the new control unit. Both alternatives are described in Planning Instructions MEW01551.

Open the current project in **TLON Manager**, add one control unit and install (download) it according to the separate TLON network Operating Instructions MEW01361. Also see 19.2.1 above.

Open the SSD for the current system via EBLWin. Add one control unit (and the units connected to it) and download the new SSD according to Planning Instructions MEW01551.

19.4 Make two TLON networks one.

It is very important that two or more presentation numbers (Zone or Zone-Address) in the systems are not the same. The system properties have to be the same.

Use one of the systems, e.g. the largest and add to it the control units etc. from the other system.[38]

If it is known from the beginning that two systems shall be one in the future, it is possible to give the control units in the system respectively, the "final" control unit numbers right from the beginning in order to get the correct technical numbers in the system documents.
NOTE! Two or more presentation numbers (Zone or Zone-Address) in the systems must not be the same.

19.5 Delete a Control Unit in a TLON network

Physically disconnect the control unit. This action will generate faults in the other control units. Acknowledge the faults.

[38] It is not possible to merge two TLON Networks into one or copy one system and paste into another system.

Open the current project in **TLON Manager**, delete the control unit according to the separate TLON network Operating Instructions MEW01361.

Open the SSD for the current system via EBLWin. Delete the control unit (and the units connected to it) and download the new SSD.

20 Upgrade number of alarm points

All EBL512 G3 settings are normally factory downloaded before delivery. It is however, possible to do the following on site:

- Upgrade the maximum number of **alarm points** (128 → 256 → 512) **NOTE!** The maximum number of COM loop addresses is always 1020, i.e. address 1 – 255 on each COM loop.

If you wish to upgrade the number of alarm points, a PC and **EBLWin** are used. The PC has to be connected to the USB connector in the control unit. See Planning Instructions MEW01351 for more information.

20.1 Control Units in a TLON network

All control units connected to a TLON network do not have to have the same max. number of alarm points set.

21 Restart

A restart will delete or not delete the data in EBL512 G3. Below follows an explanation of the different data, abbreviations and a table showing how the data respectively is affected (**cold** or **warm restart**).

FF = **F**ire alarms and **F**aults.
D = **D**isablements
FFD = **F**ire alarms, **F**aults and **D**isablements.
SSW = Sensor min. / max. values & performance factor, access codes, supervised output calibration values and event logs.
WASV = **W**eek **A**verage **S**ensor **V**alues

SSD = **S**ite **S**pecific **D**ata, i.e. all the installation programming created and downloaded via EBLWin.
S/W = Software, i.e. the EBL512 G3 system program.

Safe shut down of control unit (menu H8/S6) will save the **SSW** data (i.e. not the week average sensor values) in a Flash ROM **before you power off** (de-energize) **EBL512 G3**. Before the first "Safe shut down" this memory is empty. After each "Safe shut down" the latest SSW data is saved. When EBL512 G3 is powered up, the RAM (working memory) will, after the restart, read the SSW data saved in the Flash ROM.

The date & time and alarm counter value is stored in the memory of the real time clock, i.e. the value will be retained also after the c.i.e. has been de-energized.

NOTE! After any restart, a new **week average sensor value** will be calculated within two minutes, for all the analog smoke detectors. During these two minutes all fire alarms from analog smoke detectors will be suppressed. Thereafter a new average sensor value will be calculated each week.

Here follows a table describing the different reset alternatives and how the data respectively is affected:

Action	Data, etc. which will be deleted	Data, etc. which will be not deleted	Restart code
Power down (de-energize) [39] and then **power up** again. ("Cold restart")	SSW FFD, WASV	SSD, S/W	00 + 50[40]
Via menu H8/S6 Safe shut down of control unit. ("Cold restart")	FFD, WASV	SSD, S/W, SSW	00 (03)[41]
Via **RESET** button on Main board.	FFD, WASV	SSD, S/W, SSW[42]	03
Via **RESET** button on MMI board.		SSD, S/W, SSW FFD, WASV	53
Reset command via EBLWin or TLON Manager. ("Warm restart")	FFD, WASV	SSD, S/W, SSW	03 + 53[40]
Automatically after download of site specific data (SSD) via EBLWin. ("Warm restart")	FFD, WASV	SSD, S/W, SSW	03
Automatically after download of S/W via EBLWin.	FFD, WASV	SSD, S/W[43], SSW	00 + 50[40]
Automatically (by the S/W itself) due to some internal disturbance.	FFD, WASV	SSD, S/W, SSW[44]	13[45]
Automatically due to some external disturbance.[46]	FFD, WASV	SSD, S/W, SSW[44]	01, 02 alt. 04-20

NOTE! During the restart, the fault output (relay) for the Fault tx will be "activated", the supervised 24 V DC outputs S0-S3 will be not supervised and S0-S3 programmed as normally high will be low for a few seconds.

[39] Both rectifier (mains) and battery disconnected.

[40] Code 50 / 53 only if the c.i.e. has an MMI board (5011).

[41] If the time runs out, i.e. no safe shut down, the c.i.e. will do a restart (code 03).

[42] If in the middle of a process, also the SSW might be deleted.

[43] The old S/W will be deleted.

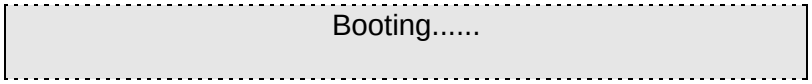
[44] Depending on the restart reason, also the SSW might be deleted.

[45] Always followed by an address.

[46] If this happens, call for service personnel / engineer.

During the "restart", no fire alarm can be activated and the following is shown in the display:

And after a few seconds (if everything is all right, else see Memory fault below):



A **fault** will be generated and the following text message will be shown in the display and the buzzer will sound:

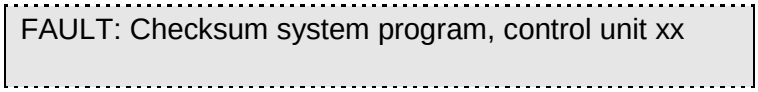
Regarding code **xx** and address **yyyyyy**, see page 71. This fault is also indicated by LEDs **Routing equipment** "Fault tx activated" (L13) and **Fault / Disablements** "General fault" (L9).

After the fault is acknowledged (via menu H6), the LEDs will be turned OFF if there are no other faults.

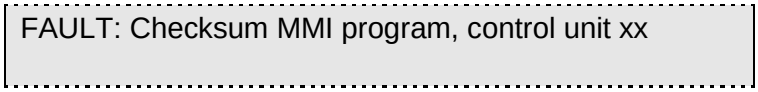
After any restart, required individual disablements have to be done.

Memory fault

In case of a fault in the Main board 5010 S/W (system program) or the MMI board 5011 S/W, the following fault message might be shown:

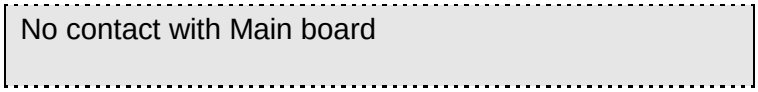


(Main board software.)



(MMI board software.)

(Not shown in the display, only via EBLWin, the Web-server or via another unit in the system.)



This is also indicated by LED "System fault" (L7) and the buzzer sounds steady (continuous). The Fault tx output is "activated".

A new download of the S/W (system programs) are required and/or the Main board and/or the MMI board have to be replaced.

NOTE! After **SSD download** the following messages might be shown:

```
Checksum fault in downloaded data.
Control unit will now restart.
```

After restart:

```
FAULT: Restart control unit nn, code xx,
address yyyyyyyyy
```

```
FAULT: Site specific data (SSD), control unit xx
```

This means that the SSD have **not** been (correctly) downloaded. A new SSD download has to be performed.

22 Access

To use the key pad in the control unit (to get access to the menus), it is necessary to **logon** with a **User name** and a **Password** for level 2B, 2C or 3A. See also chapter "User level, User name & Password", page 27. Open the door in the control unit (= level 2A), press the soft key "Menu" (P4) to log in.

Action	Text in display	Comments
	 EBL512 G3 Control Unit: XX User definable text. User definable text. yyyy-mm-dd hh:mm Menu	Door open. **XX** = 00 – 29 **y**ear-**m**onth-**d**ate **h**our:**m**inute Soft key "Menu".
"Menu"	Log in as: 0 Information only 1 Building officer 2 Service personnel	0,1 and 2 are default. There might be more users in the list, if programmed via EBLWin.
Enter 0, 1 or 2 e.g. "2"	Service personnel Password:	If you enter "0" no password is required. The digits will be replaced by ****** in the display.
Enter the password (six digits)	Service personnel Password: *****	
	NO ACCESS!	No access will be shown if the password was not correct. Try again.
"2", "Password" (six digits)	 menu H1 Perform monthly test H2 Disable or re-enable H3 Set calendar and clock H4 Present system status H5 Service H6 FAULT Acknowledge H7 Perform ZONE TEST H8 Maintenance H9 Interlocking outputs and inputs H10 Change password	If the password is correct a main menu list is displayed. Press "↵ " to accept (menu H1) **or** scroll / jump to the wanted menu (H2-H10) and press "↵ ". **NOTE!** The menu list will be different for user levels "Information only" and "Building officer".

	Escape menu		

NOTE! When the Russian, Ukraine, Australian or the New Zealand language is selected the date is shown as follows: **dd-mm-yyyy**.

Explanations:
Action (in the table) = use push button / key (e.g. "↲ ").
Text in display (in the table) = what is shown in the control unit (c.i.e.) display.
Comments (in the table) = Comments to the text in the "Action" and "Text in display" columns.

Use "▲" and "▼" to scroll between the main menus H1-H10. Use "↲ " ("Enter") to accept.
Some main menus have sub menus. Use "▲" and "▼" to scroll between the sub menus (e.g. B1-B6). Use "↲ " to accept.

NOTE! The menus are circular, i.e. if you scroll with "▼" and the last menu is reached, the first menu comes up next.

Quick jump can be used within each menu, e.g. in menu H1 press "6" for a quick jump to menu H6. ("1" and then "0" within ½ sec. = 10).

In some cases a cursor appears e.g. `Disable zone: 000`
It is then possible to type in digits with the numeric keys **0 – 9**.

Use "◄", "►", "▲" and "▼" to move the cursor in a menu.
Use "**ESC**" to return from a sub menu to the main menu (H1-H10) or from a main menu to leave the menu system.

Use the soft key "**Escape menu**" (when it is available) to leave the menu system from any menu. Note, no text above a soft key = the key is not available (i.e. it has no function).

You will be automatically logged out 15 minutes after the last action (i.e. if the key pad or a push button has not been used for 15 min.) and directly when you close the door. A new login is then required.
If you leave the menu system without closing the door, you have access to the menu system again only by using the soft key "**Menu**". A new login is not required.

Some lists are dynamic lists, i.e. the number of items per page depends on the size of each item.

Some lists are static lists, i.e. a fixed maximum number of items per page.

NOTE! In the following chapters are all the menus described.

The "Text in display" column shows the essential text and might **not look exactly** as shown in the display.

23 Perform monthly test (H1)

The control unit and the installation shall be tested on a regular basis. If one twelfth of the alarm points are tested each month, the whole installation will be tested after one year.
In test mode, only the alarm points are tested, i.e. no outputs (no sounders) will be activated during the test. (Alarm devices can be tested via menu H8/S4.)

If a real fire alarm is activated, for example by **an alarm point not in test mode**, the normal fire alarm functions will be activated, i.e. fire alarm presentation, outputs (sounders) activated, routing equipment (fire brigade tx) activated, etc.

See also chapter "The information area priority order", page 25.

NOTE! If the control unit door is left open, the output(s) for routing equipment (fire brigade tx) might be disabled (if set so in EBLWin).

The test mode will be automatically ended one hour after the latest test alarm.
See also chapter "Perform ZONE TEST (Test mode) (H7)", page 131.

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 88.
	H1 Perform monthly test	
"↲ "	Check that all LEDs light up! Press ↲	
"↲ "	[All dots are visible]	The buzzer (in the C.U.) sounds and all dots in the display are shown. All LEDs light up, incl. LEDs in units connected via I/O Matrix board 4582. If a printer is mounted in the c.i.e. it will print out: ABCDE……Z abcde……z
"↲ "	Zones to be set in test mode: ??? ??? ??? ??? Start test: ↲	
Write zone numbers (e.g. 001, 002, 003, 004)	Zones to be set in test mode 001 002 003 004	Press "↲ " to start the test mode.

"↲ "	Zones in test mode: 001 002 003 004 End test: ↲	LED "Test mode" (L8) will light up. Perform the tests.

The zone(s) will **stay in test mode until the test mode is ended**. The test mode is ended in this menu or automatically one hour after the latest test alarm.

You will be automatically logged out 15 minutes after the latest "action" (using of any key) but the zone(s) will **stay in test mode until the test mode is ended**, see above.

Perform the test as quickly as possible, since the output(s) for routing equipment (fire brigade tx) are disabled (also the parts of the zones in test mode, not visible for the test personnel, are disabled).

In order to shorten the testing time, any time delay for the detectors / zones in test mode will be "disabled", i.e. fire alarm will be detected faster than normally.

In the tested alarm point, the LED will light up, and the LEDs "Fire" (L1) in the c.i.e. will light up approx. 10 seconds, then the alarm point will be automatically reset. The printer, if available, will print out every tested alarm point (Zone: xxx Address: xx Time: HH.MM).

A detector in test mode is not able to generate a fault.

After 15 minutes **or** "ESC" and "Escape menu"	Zone 001 in test mode Zone 002 in test mode Zone 003 in test mode Zone 004 in test mode *(NOTE! See chapter "The information area priority order", page 25 regarding priority order.)*	You are logged out but the zone(s) are still in test mode.
"Menu" Log in (see above), select menu H1, step down to this view.	Zones in test mode: 001 002 003 004 End test: ↲	Press "↲ " to end test.
"↲ "	Please wait....	
	Test of routing equipment? No Yes	The LED "Test mode" is turned OFF.

Some national regulations also require a routine test of the routing equipment.
Press press "↲ " (i.e. select "No") for no test. If so, the monthly test is completed (see below).
or
Press "▼" and "↲ " (i.e. select "Yes") to start such a test. If so, the following will happen in the system:

- The c.i.e. "Fault tx" output will be de-activated (note that this output is **activated** in normal state), indicated by the LED "Fault tx activated" (L13).
  60 seconds count-down starts.
- After 30 seconds, also the c.i.e. "Fire brigade tx" output (and corresponding programmable outputs type "routing equipment") will be activated, indicated by the LED "Fire brigade tx" (L3).
- After another 30 seconds, the test will be ended and the outputs and LEDs will return to "normal".

"▼" and "↲ "	Test of routing equipment in progress. nnn seconds left.	"nn" starts at 060 and will count down to 000.

	Monthly test is completed! Press ↲	
"↲ "	▒▒▒ menu H1 Perform monthly test H2	Scroll to another menu or press "ESC".

NOTE_1! During the test, the following information will be shown in all other c.i.e. displays:
Zone 001 in test mode
Zone 002 in test mode
Zone 003 in test mode
Zone 004 in test mode

NOTE_2! If an alarm point (e.g. a manual call point) is in alarm state when the test mode is ended, there will be a fire alarm activated.

NOTE_3! When the "Fire door closing" function is used, the fire door will be closed when the detectors controlling the door are tested in test mode.

24 Disable or re-enable (H2)

A whole zone, one or more alarm points within a zone and/or control outputs can be disabled via menus H2/B1-B2. This function can be used for temporary disablement (e.g. craftsmen working in the premises, etc.).

If the function **Enhanced disablement** is enabled (default), disabled alarm points cannot activate Pre-warning, fire alarm and fault.

If this function is not enabled (via EBLWin), disabled alarm points cannot activate Pre-warning and fire alarm but fault can be generated. (This is a violation to the EN54-2 standard.

An Addressable manual call point can be disabled (but shall normally not be disabled). However, when a whole zone is disabled, the addressable manual call points will not be disabled for safety reasons. (This function can depend on convention / country.)

Up to 512 whole zones can be disabled via menu H2/B1.
Up to 200 alarm points (zones / address) can be **individually** disabled via menu H2/B1. COM loops, zone interface inputs and/or MIO inputs can be disabled via menu H8/S1. (Alarm points disabled via time channels are not limited and must not be counted!)
Up to 200 outputs can be **individually** disabled via menu H2/B2. Disabled output will stay in (or return to) the normal condition for the output respectively. (Collectively disabled outputs via menus H2/B3 – B4 are not limited and must not be counted!)
Up to 200 Interlocking outputs can be **individually** disabled via menu H9/C3.

It is not possible to exceed the limits. A warning will be shown:

```
Max. disablements reached!
Disablement not performed.
```

Don't forget to re-enable (via menus H2/B1-B2, H8/S1, H9/C3 or use automatic re-enablement for zones and alarm points.

Disablements are listed in menus H4/U1 & U2 from which it is also possible to get a print-out.

LED **Fault / Disablements** "General disablements" (L10) is indicating one or more disablements in the system.

Disablements are also shown in the display. An example:

```
Zone 001 disabled
yyyy-mm-dd   hh:mm

Zone 002 address 01 disabled
yyyy-mm-dd   hh:mm

....

Number of disablements in system:  2
```

NOTE! See chapter "The information area priority order", page 25, regarding priority order.

Disablements (and faults) are indicated by a 2-sec. beep when you close the control unit door.

24.1 Zone or Zone/Address (H2/B1)

When a whole zone is disabled, all alarm points within the zone will be disabled except the addressable manual call points. (Not valid for the Australian and New Zealand conventions.)

Alarm points can be individually disabled.

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 88.
Scroll to menu H2.	H2 Disable or re-enable	
"↵ "	B1 Zone or Zone/Address B2 Output B3 Output type B4 Alarm devices B5 Routing equipment B6 Alert annunciation function Escape menu	- Via **menu B1** can a Zone or an alarm point (Zone / Address) be disabled. - A time for automatic re-enablement can be set. - Disabled zones and alarm points are shown in a Re-enable list.
"↵ "	Disable Zone 000 Automatic re-enable: No Change type of disablement	Use the soft key "Change type of disablements" to toggle between: **Zone** 000 and **Zone** 000..**address** 00.
"Change type of disablements"	Disable Zone 000 address 00 Automatic re-enable: No Change type of disablement	Write the zone number and address. To set an automatic re-enable time press "▼" and "►". Write the time (default is current time + 3 hours). Press "↵ " to disable, which will be indicated with "√" and a beep. The zone will directly be shown in the Re-enable list

Write the zone number and address (e.g. 003, 01). "▼" "►" "↲ "	Disable Zone 003 address 01 √ Automatic re-enable: No Yes, at 17:05 -- Re-enable list (1) ---------- Zone 003 address 01 autom. re-enable at 17:05 →| Change type of disablement	If the specified zone / unit doesn't exist, it will be indicated with "X" instead of "√" and a beep. Use the soft key "→|" to toggle between **Disable** and **Re-enable list**.
"→|"	Disable ---------- Zone _ _ _ address _ _ Automatic re-enable: No Re-enable list (1) Zone 003 address 01 autom. re-enable at 17:05 →| Change type of disablement	Select in the Re-enable list "▼" (in this example there is only one item) and press "↲ ". Re-enabled zone or zone / address will disappear from the list, indicated with a beep.
"↲ "	Disable Zone 000 address 00 Automatic re-enable: No Change type of disablement	Disable (or Re-enable) another Zone, Zone / Address or press "ESC".
"ESC"	B1 Zone or Zone/Address B2 Output B3 Output type B4 Alarm devices B5 Routing equipment B6 Alert annunciation function Escape menu	Scroll to another menu or press "ESC" or "Escape menu".

NOTE!

The sensor values for disabled analog smoke detectors in NORMAL mode will not be used for calculation of the week average sensor value, i.e. only the values saved before and after the disablement will be used for this calculation.

24.2 Output (H2/B2)

All programmable outputs in the c.i.e. and outputs in units connected to the COM loops (**except outputs of type "Alarm device"**) can be individually disabled.

If you try to disable an output of type "Alarm device" it will be treated as if it does not exist, see below.

Disabled output: Even if its control expression (trigger condition) is fulfilled (true), the output will not be activated.

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 88.
Scroll to menu H2.	H2 Disable or re-enable	
"↵ "	B1 Zone or Zone/Address B2 Output B3 Output type B4 Alarm devices B5 Routing equipment B6 Alert annunciation function Escape menu	
Scroll to menu B2.	B2 Output	Via menu B2 can a loop unit output, C.U. output S0-S3 / R0-R1 and exp. board output be disabled.
"↵ "	Disable output Loop unit 000000 output 0 Change type of disablements	Use the soft key "Change type of disablements" to toggle between: **Loop unit output** **Control unit output S** **Control unit output R** **Exp. board output** Write loop unit technical number and output number and press "↵ " to disable, which will be indicated with "√" and a beep. The output will directly be shown in the Re-enable list

Write loop unit technical number and output number, (e.g. 000001 and 0). "↲ "	Disable output Loop unit 000000 output 0 √ -- Re-enable list (1) ---------- Loop unit 000001 output 0 →| Change type of disablements	If the specified output doesn't exist, it will be indicated with "X" instead of "√" and a beep. Use the soft key "→|" to toggle between **Disable** and **Re-enable list**.
"→|"	Disable output ---------- Loop unit _ _ _ output _ Automatic re-enable: No Re-enable list (1) Loop unit 000001 output 0 →| Change type of disablement	Select in the Re-enable list with "▼" (in this example there is only one item) and press "↲ ". Re-enabled output will disappear from the list, indicated with a beep.
"↲ "	Disable output Loop unit 000000 output 0 Change type of disablements	Disable (or Re-enable) another output or press "ESC".
"ESC"	B1 Zone or Zone/Address B2 Output B3 Output type B4 Alarm devices B5 Routing equipment B6 Alert annunciation function Escape menu	Scroll to another menu or press "ESC" or "Escape menu".

24.3 Output type (H2/B3)

All outputs of type "Control", "Ventilation", "Extinguishing" and Interlocking can be collectively disabled. Disabled output will stay in (or return to) the normal condition for the output respectively.

Disabled outputs are listed in menu H4/U1 from which it is also possible to get a print-out.

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 88.
Scroll to menu H2.	H2 Disable or re-enable	
"↲ "	B1 Zone or Zone/Address B2 Output B3 Output type B4 Alarm devices B5 Routing equipment B6 Alert annunciation function Escape menu	
Scroll to menu B3.	B3 Output type	Via menu B3 can outputs of the same type be collectively disabled in selected control unit or all.
"↲ "	Disable output type Control outputs in Control unit 00 All Change type of disablements	Use the soft key "Change type of disablements" to toggle between: **Control** **Ventilation** **Extinguishing** **Interlocking** Write control unit number when required. Press "↲ " to disable, which will be indicated with "√" and a beep. The "type" will directly be shown in the Re-enable list

"↲ "	Disable output type Control outputs in Control unit 00 All √ -- Re-enable list (1) ---------- All control outputs →| Change type of disablements	Use the soft key "→|" to toggle between **Disable** and **Re-enable list**.
"→|"	Disable output type ---------- Control outputs in Control unit 00 All Re-enable list (1) All control outputs →| Change type of disablement	Select in the Re-enable list with "▼" (in this example there is only one item) and press "↲ ". Re-enabled type will disappear from the list, indicated with a beep.
"↲ "	Disable output type Control outputs in Control unit 00 All Change type of disablements	Disable (or Re-enable) another type or press "ESC".
"ESC"	B1 Zone or Zone/Address B2 Output B3 Output type B4 Alarm devices B5 Routing equipment B6 Alert annunciation function Escape menu	Scroll to another menu or press "ESC" or "Escape menu".

24.4 Alarm devices (H2/B4)

All outputs of type "Alarm device" can be collectively disabled. Disabled output will stay in (or return to) the normal condition for the output respectively.

Disabled outputs are listed in menu H4/U1 from which it is also possible to get a print-out.

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 88.
Scroll to menu H2.	H2 Disable or re-enable	
"↲ "	B1 Zone or Zone/Address B2 Output B3 Output type B4 Alarm devices B5 Routing equipment B6 Alert annunciation function Escape menu	
Scroll to menu B4.	B4 Alarm devices	Via menu B4 can all outputs of type "Alarm device" be collectively disabled in all control unit.
"↲ "	Disable All alarm devices	Press "↲ " to disable, which will be indicated with "√" and a beep. The "type" will directly be shown in the Re-enable list
"↲ "	Disable All alarm devices √ -- Re-enable list ---------- All alarm devices →|	Use the soft key "→|" to toggle between **Disable** and **Re-enable list**.

"→|"	Disable ---------- All alarm devices Re-enable list All alarm devices 	Press "↲ " to re-enable. Re-enabled type will disappear from the list, indicated with a beep.
"↲ "	Disable All alarm devices	Disable (or Re-enable) another type or press "ESC".
"ESC"	B1 Zone or Zone/Address B2 Output B3 Output type B4 Alarm device B5 Routing equipment B6 Alert annunciation function Escape menu	Scroll to another menu or press "ESC" or "Escape menu".

24.5 Routing equipment (H2/B5)

Disabled outputs are listed in menu H4/U1 from which it is possible to get a print-out.

Outputs for routing equipment (fire brigade tx and fault tx) can be disabled and re-enabled via this menu. Can be useful during an installation and test period, when only local alarms are required.

Disabled output for routing equipment is indicated by LEDs **Fault / Disablements** "General disablements" (L10) and "Fire brigade tx" (L12).

Disabled output will stay disabled until re-enabled again via this menu.

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 88.
Scroll to menu H2.	H2 Disable or re-enable	
"↲ "	B1 Zone or Zone/Address B2 Output B3 Output type B4 Alarm devices B5 Routing equipment B6 Alert annunciation function Escape menu	
Scroll to menu B5.	B5 Routing equipment	Via menu B5 can the standard outputs (fire and fault) for routing equipment be disabled.
"↲ "	Disable Routing equipment Fire Fault	Use "◀", "▶"to toggle between: **Fire** **Fault** Press "↲ " to disable, which will be indicated with "√" and a beep. The "type" will directly be shown in the Re-enable list

"↲ "	Disable routing equipment Fire Fault √ -- Disabled routing equipment ---------- Fire alarm routing →|	Use the soft key "→|" to toggle between **Disable** and **Disabled**.
"→|"	Disable routing equipment ---------- Fire Fault Disabled routing equipment Fire alarm routing →|	Press "↲ " to re-enable. Re-enabled routing equipment will disappear, indicated with a beep.
"↲ "	Disable Routing equipment Fire Fault	Disable or press "ESC".
"ESC"	B1 Zone or Zone/Address B2 Output B3 Output type B4 Alarm devices B5 Routing equipment B6 Alert annunciation function Escape menu	Scroll to another menu or press "ESC" or "Escape menu".

24.6 Alert Annunciation (H2/B6)

Normal function:

For alarm points / zones programmed for **A**lert **A**nnunciation (via EBLWin) is normally the **AA** function enabled via a time channel, e.g. enabled daytime (during working hours) and disabled night time.
As an alternative, the **AA** function can be continuously enabled (always on).

Via this menu (H2/B6) it is possible to disable the **AA** function, i.e. the **AA** function will be turned off for the alarm points / zones programmed for **A**lert **A**nnunciation in spite of the time channel is "on" or if they are programmed to be continuously enabled.

The **AA** function will be **turned off** until re-enabled via this menu.

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 88.
Scroll to menu H2.	H2 Disable or re-enable	
"↲ "	B1 Zone or Zone/Address B2 Output B3 Output type B4 Alarm devices B5 Routing equipment B6 Alert annunciation function Escape menu	
Scroll to menu B6.	B6 Alert annunciation function	Via menu B6 can the Alert Annunciation function be disabled.
"↲ "	Disable Alert annunciation	Press "↲ " to disable, which will be indicated with "√" and a beep. The disablement will directly be shown in the Re-enable list
"↲ "	Disable Alert annunciation √ -- Re-enable list ---------- Alert annunciation off →|	Use the soft key "→|" to toggle between **Disable** and **Re-enable**.

"→|"	Disable ---------- Alert annunciation Re-enable list Alert annunciation off 	Press "↲ " to re-enable. Alert annunciation off will disappear from the list, indicated with a beep.
"↲ "	Disable Alert annunciation	Disable or press "ESC".
"ESC"	B1 Zone or Zone/Address B2 Output B3 Output type B4 Alarm devices B5 Routing equipment B6 Alert annunciation function Escape menu	Scroll to another menu or press "ESC" or "Escape menu".

25 Set calendar and clock (H3)

The RTC component has a capacitor as a backup power supply. Normally, date, day of the week and time only have to be set when the power is turned on the control unit for the first time.[47] If required, the clock might be corrected, so that the "time stamps" for fire alarms, faults, etc. will be correct.

The calendar and clock can be set in any c.i.e. for the whole system. Every day (at midnight) the calendar and clock will be synchronised.

NOTE! If you don't want to change anything, press "ESC" instead of "↲ " to return to menu H3.

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 88.
Scroll to menu H3.	H3 Set calendar and clock	
"↲ "	YYYY-MM-DD hh:mm Monday Tuesday Wednesday Thursday Friday Saturday Sunday	The date & time shown was valid when this menu was opened. When required, change the date, time and/or weekday (press "▼" or "▲" to select the weekday). The "clock" starts again as from the date, time, etc. *shown in the display* when you press "↲ ". **If no changes shall be done, press "ESC" instead of "↲ ".**
"↲ "	H3 Set calendar and clock	Scroll to another menu or press "ESC".

NOTE!

When the Russian, Ukraine, Australian or the New Zealand language is selected the date is shown as follows: **DD-MM-YYYY**.

[47] The capacitor can supply the RTC for a couple of days. When the power has been turned off, it is recommended to check / set the date and time in menu H3.

26 Present system status (H4)

If a printer is mounted (an option for control unit 5000), it is possible to get a print-out from some of the menus. In this case, the soft key "Print" (P5) shall be used. **NOTE!** During printing "Print" will be replaced with "Abort printing". When "Abort printing" is pressed the soft key text immediately changes back to "Print" but the items already stored in the print buffer will be printed (up to five items).

26.1 Disablement (H4/U1)

This is a dynamic list of all disablements in the system. Also alarm point(s) and/or zones disabled via "Single reset with automatic disablement" (see page 56) are shown in the list. A disabled **zone** programmed with address 00 will be displayed as ZZZ-00. Disablements by time channels are listed in menu H4/U2.

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 88.
Scroll to menu H4.	H4 Present system status	
"↲ "	U1 Disablement U2 Disablement by time channel U3 Open doors U4 Sensor values U5 Sensors activating SERVICE signal U6 Technical warning U7 Event log U8 Information	Via menu U1 will all disablements in the system, except disablements by time channels, be shown. Press "↲ ".
"↲ "	Zone XXX address XX disabled yyyy-mm-dd hh:mm Zone XXX is disabled Automatic re-enable hh:mm yyyy-mm-dd hh:mm Alarm points disabled by time channel in control unit XX yyyy-mm-dd hh:mm .... Disablement 1 to 3 of 7 Print	If there are no disablements --List is empty-- will be shown. It is a dynamic list in which you can scroll with "▼" or "▲". (Information is shown about disablements by time channels.) If printer is mounted the soft key "Print" will be visible, else not. Press "Print" for a print-out of all items in the list.
"ESC"	U1 Disablement	Scroll to another menu or press "ESC".

26.2 Disablement by time channel (H4/U2)

A static list (up to four items per page) of all disablements by time channel(s) in the system.

NOTE! All other disablements are listed in menu H4/U1.

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 88.
Scroll to menu H4.	H4 Present system status	
"↲ "	U1 Disablement U2 Disablement by time channel U3 Open doors U4 Sensor values U5 Sensors activating SERVICE signal U6 Technical warning U7 Event log U8 Information	Via menu U2 will all disablements by time channels, be shown. Press "↲ ".
Scroll to menu U2.	U2 Disablement by time channel	
"↲ "	Zone XXX address XX disabled by time channel Zone XXX address YY disabled by time channel. .... Number of disablement by time channel: 2	If there are no disablements --List is empty-- will be shown. It is a static list (up to 4 items per page) in which you can scroll with "▼" or "▲".
"ESC"	U2 Disablement by time channel	Scroll to another menu or press "ESC".

26.3 Open doors (H4/U3)

If any door in the system is open the following symbol is shown in the display's symbol area:

See also chapter "Open door", page 40.

This menu is a dynamic list of all open doors in the system.

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 88.
Scroll to menu H4.	H4 Present system status	
"↲ "	U1 Disablement U2 Disablement by time channel U3 Open doors U4 Sensor values U5 Sensors activating SERVICE signal U6 Technical warning U7 Event log U8 Information	Via menu U3 will all open doors in the system be shown. Press "↲ ".
Scroll to menu U3.	U3 Open doors	
"↲ "	Door open control unit 00 yyyy-mm-dd hh:mm Door open control unit 01 fire brigade panel 00 yyyy-mm-dd hh:mm .... Open door 1 to 2 of 2 Print	It is a dynamic list in which you can scroll with "▼" or "▲". If printer is mounted the soft key "Print" will be visible, else not. Press "Print" for a print-out of all items in the list.
"ESC"	U3 Open doors	Scroll to another menu or press "ESC".

NOTE! During printing "Print" will be replaced with "Abort printing".

26.4 Sensor values (H4/U4)

The "Momentary" value in this menu will be updated after every detector polling, i.e. approx. every 6th second.

The very first week average sensor value for the 430x and 440x detectors in **NORMAL mode** is calculated within 2½ minutes after SSD download & restart. During these 2½ minutes can no fire alarm be activated and "Weekly: **00.0**%/m" will be shown. The "Weekly" value will thereafter be updated every week.

For the 440x detectors in **Advanced mode** the "Weekly" value is **00.0**%/m by delivery. It will be updated the very first time after 13 minutes. It will thereafter be calculated every 13th minute but will then only be changed downwards if required. After 18 hours it can be changed downwards or upwards and after additional 18 hours (36 hours in all) it can be changed downwards or upwards and it is also saved in the detector's EEPROM, i.e. that value will be used after the detector has been powerless. The "Weekly" value for the 440x detectors in **Advanced mode** is also called the "Contamination Compensation Value (CCV).

The "Performance factor" and "Min. / Max." values are updated each night (00:00), i.e. the values shown are from the previous day.

"Algorithm" shows the algorithm that is currently in use.

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 88.
Scroll to menu H4.	H4 Present system status	
"↲ "	U1 Disablement U2 Disablement by time channel U3 Open doors U4 Sensor values U5 Sensors activating SERVICE signal U6 Technical warning U7 Event log U8 Information	
Scroll to menu U4.	U4 Sensor values	
"↲ "	Start sensor: 000000	Write the technical number and/or press "↲ " to start as from sensor 000001.

"↲ "	*For an Analog multi detector **4300 / 4400** in **NORMAL mode**:* Sensor: 001-01 (technical address 000001) Momentary: XX.X%/m Weekly: XX.X%/m Perf factor: X.XX%/m Min: XX.X%/m Algorithm: X-XX Max: XX.X%/m Momentary: XX°C Min: XX°C Algorithm: XX Max: XX°C *For an Analog heat detector **3308 / 3309** in **NORMAL mode**:* Sensor: 001-03 (technical address 000002) Momentary: XX°C Min: XX°C Algorithm: XX Max: XX°C *For an Analog multi detector **4400** in **Advanced mode**:* Sensor: 001-01 (technical address 000001) Momentary: XX.X%/m Weekly: XX.X%/m Perf factor: X.XX%/m Min: XX.X%/m Algorithm: Xxxxxx Max: XX.X%/m Momentary: XX°C Min: XX°C Max: XX°C Print	If there are no sensors (analog detectors) when "↲ " is pressed, the list view will not open. It is a list in which you can scroll with "▼" or "▲". If printer is mounted the soft key "Print" will be visible, else not. Press "Print" for a print-out.
"↲ "	Start sensor: 000000	Write another technical number and press "↲ " or press "ESC".
"ESC"	U4 Sensor values	Scroll to another menu or press "ESC".

NOTE! During printing "Print" will be replaced with "Abort printing".

Regarding the **Performance factor**:

$$\frac{\sum_{m=0}^{14400} |X_m - X_{wa}|}{14400} = Pf$$

X_m = momentary sensor values for 24 hours.
X_{wa} = weak average sensor value
14400 = pollings during 24 hours

The Performance factor can be 0.00 – 2.55. How the Performance factor (Pf) is calculated is shown to the left.

The Performance factor is normally close to 0.00, which means that the detector is mounted in a "stable" environment. The momentary sensor values during 24 hours do not differ a lot from the week average sensor value.

In an "unstable" environment the Performance factor will be higher than 0.00. This could for example be the case in a factory (e.g. "dirty" activities during working hours – no or clean activities during the night) and is not a problem as long as there are no nuisance (false) alarms or other problems.

Algorithms

Table showing the algorithms and the shortenings respectively:

Algorithm Detectors 3308/3309, 430x and 440x, all in NORMAL mode.	**Short name**[48]
Normal sensitivity (3%/m) & Normal detection (**15** s)	**N-15**
High sensitivity (2.4%/m) & Normal detection (15 s)	H-15
Low sensitivity (3.6%/m) & Normal detection (15 s)	L-15
Normal sensitivity (3%/m) & Slow detection (35 s)	N-35
High sensitivity (2.4%/m) & Slow detection (35 s)	H-35
Low sensitivity (3.6%/m) & Slow detection (35 s)	L-35
Heat algorithm, Class A1	**A1**
Heat algorithm, Class A2 (S)	A2
Heat algorithm, Class B (S)	B
Decision algorithm	Dec[49]

Default is N-15 and A1 respectively.

Algorithm Detector 4400 in Advanced mode.	**Short name**
Normal area	**Normal**
Clean area	Clean
Cooking-Welding area	Welding
Heater area	Heater
Smoke-Steam area	Smoke

Default is Normal.

Algorithm Detector 4401 in Advanced mode.	**Short name**
Normal area	**Normal**
Clean area	Clean
Smoke-Steam area	Smoke

Default is Normal.

[48] If some other short name is wanted, it can be changed in EBLWin. Up to six characters can be used.

[49] Analog multi detector 4300 only.

26.5 Sensors activating SERVICE signal (H4/U5)

When SERVICE signal is generated in the system, following symbol is shown in the display's symbol area:

Regarding the SERVICE signal levels, see Planning Instructions, chapter "SERVICE signal".

Menu H4/U5 is a list of the sensor(s) having activated SERVICE signal.

NOTE! SERVICE signal is only information that the sensor has to be replaced with a new/clean sensor soon. After the replacement, the SERVICE signal has to be acknowledged, see chapter "Acknowledge SERVICE signal (H8/S2)", page 136.

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 88.
Scroll to menu H4.	H4 Present system status	
"↲ "	U1 Disablement U2 Disablement by time channel U3 Open doors U4 Sensor values U5 Sensors activating SERVICE signal U6 Technical warning U7 Event log U8 Information	
Scroll to menu U5.	U5 Sensors activating SERVICE signal	
"↲ "	Sensor, Zone ZZZ address AA needs service technical number xxxxxx 2012-11-10 09:09:15 Sensor, Zone ZZZ address AA needs service technical number xxxxxx 2012-10-03 19:09:35 Number of sensors: 2 Print	If there are no sensors, --List is empty-- will be shown. It is a list in which you can scroll with "▼" or "▲". If printer is mounted the soft key "Print" will be visible, else not. Press "Print" for a print-out of all items in the list.
"ESC"	U5 Sensors activating SERVICE signal	Scroll to another menu or press "ESC".

NOTE! During printing "Print" will be replaced with "Abort printing".

26.6 Technical warning (H4/U6)

A technical warning is an event that is neither a fire alarm nor a fault. It is an information that something has or has not happened and is generated via a programmable input. The text message, shown in the c.i.e. display, is user programmable (up to 40 characters). One or more activated technical warnings are indicated by in the display's symbol area.

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 88.
Scroll to menu H4.	H4 Present system status	
"↲ "	U1 Disablement U2 Disablement by time channel U3 Open doors U4 Sensor values U5 Sensors activating SERVICE signal U6 Technical warning U7 Event log U8 Information	
Scroll to menu U6.	U6 Technical warning	
"↲ "	Technical warning text message 2012-11-10 09:09:15 Yyyy yyyyyyyyyy yyyyyyyyyyy! 2012-10-03 19:09:35 1 to 2 of 2 Print	If there are no technical warnings, --List is empty-- will be shown. It is a list in which you can scroll with "▼" or "▲". If printer is mounted the soft key "Print" will be visible, else not. Press "Print" for a print-out of all items in the list.
"ESC"	U6 Technical warning	Scroll to another menu or press "ESC".

NOTE!

During printing "Print" will be replaced with "Abort printing".
Technical warnings can be used to activate programmable outputs.

26.7 Event log (H4/U7)

Three event logs (3 x 999 events) are available:

1. Alarm log (alarm events, e.g. fire alarm, fire alarm reset, etc.)
2. Interlocking log (interlocking events only)
3. General event log (all other type of events)

The origin of the event, e.g. **CU00** (see below), can instead be **EBLWin**, **WebG3** or **Ext#** (External system no. # connected via Web-server.

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 88.
Scroll to menu H4.	H4 Present system status	
"↲ "	U1 Disablement U2 Disablement by time channel U3 Open doors U4 Sensor values U5 Sensors activating SERVICE signal U6 Technical warning U7 Event log U8 Information	
Scroll to menu U7.	U7 Event log	
"↲ "	Select event log: Alarm log Interlocking log General event log	Use "▼" or "▲" to select a log. (E.g. the "Alarm log".)
"↲ "	Command: Reset all alarms 2009-12-03 09:25:30 CU00 FIRE ALARM zone 123 address 45 2009-12-03 09:09:15 CU00 FIRE ALARM zone 123 address 46 2009-12-03 09:07:01 CU00 Event 15 to 13 of 21 Print	If there are no events, --List is empty-- will be shown. It is a dynamic list in which you can scroll with "▼" or "▲". The most recent event is on top of the list. If printer is mounted the soft key "Print" will be visible, else not. Press "Print" to select and print the events the latest **hour, day, week or month**. Scroll with "▼" or "▲" to view more events.
"ESC"	U6 Event log	Scroll to another menu or press "ESC".

NOTE! During printing "Print" will be replaced with "Abort printing".

26.8 Information (H4/U8)

This menu can be used to show the following information for the specific control unit you currently use:

Main board version The S/W (software / firmware / system program) version downloaded to the Main board 5010.

MMI board version The S/W (software / firmware / system program) version downloaded to the MMI board 5011.

Alarm counter The alarm counter is increased with "1" every time the c.i.e. enters a real "fire alarm condition" (i.e. fire alarm indication in the display, LEDs "Fire" are lit and the c.i.e. buzzer is sounding). Alarms from zones in test mode will not be counted. It starts on 000 and goes to 999. It can be reset to 000 via EBLWin (Control unit menu "Reset alarm counter…"). The value will be retained also after the c.i.e. has been completely powerless.

Max. number of allowed alarm points that can be used in this control unit, i.e. 128, 256 or 512. (Configured number of alarm points.)

Serial number The manufacturer's serial number (year YY, week WW, number of the main board NNN). Used e.g. when upgrading max. no. of allowed alarm points.

Control unit number 00-29.

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 88.
Scroll to menu H4.	H4 Present system status	
"↲ "	U1 Disablement U2 Disablement by time channel U3 Open doors U4 Sensor values U5 Sensors activating SERVICE signal U6 Technical warning U7 Event log U8 Information	
Scroll to menu U8.	U8 Information	
"↲ "	Main board version: 2.0.0 MMI board version: 2.0.0 Alarm counter: nnn Max number of allowed alarm points: xxx Serial number: xxxxxxx Control unit: NN Print	If printer is mounted the soft key "Print" will be visible, else not. Press "Print" for a print-out.
"ESC"	U7 Information	Scroll to another menu or press "ESC".

27 Service (H5)

When commissioning an installation and by maintenance (e.g. when you power on and when you are programming a control unit / system), menu H5 can be used for certain actions, information and help.

Only authorised personnel have access to the level 3A menus and a p**assword for level 3A (Service technician) is required.**

Via a PC[50] and EBLWin you can:

- download / backup (upload) the site specific data (SSD)
- create and download software (S/W), settings, configurations, control unit and system properties.
- create and download the user definable text messages (alarm texts) shown in the display in the control unit, ext. FBP and other Display units.

NOTE!
To be able to log on to an EBL512 G3 c.i.e. via a PC and EBLWin, the PC has to be provided with an EBLWin key (5094). This USB device has a number (a key) required for the log on.

Via a PC[51] and **TLON Manager** you can create and download (install) the TLON network configuration (TLON project).

[50] Connected to the "USB" connector above the front panel.

[51] Connected to the modular connectors J10 (TLON network 0) or J11 (TLON network 1) on the main board 5010.

27.1 Calibration of supervised outputs (H5/A1)

Supervised (monitored) outputs
The voltage outputs (S0-S3) in each control unit.
The voltage outputs (VO0-VO1) in the COM loop output unit 3364.
The voltage outputs (0-2) on the I/O exp. board 4583.

When all alarm devices (sounders, etc.) have been connected, including required end-of-line devices[52] and when the SSD is downloaded, a **calibration** has to be done.

Function: The calibrated range is 4K7 – 50K and 470 – 5x470 nF respectively. If the actual value at any time differs from the calibrated value ± a small tolerance or if the calibrated value is outside the calibration range, a fault will be generated.

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 88.
Scroll to menu H5.	H5 Service	
"↲ "	A1 Calibration of supervised outputs A2 Sensitive fault detection mode A3 Service mode for COM-loop A4 Display current consumption in control unit A5 Display current consumption on COM-loop A6 Display statistics for communication A7 Activate address setting mode for DU A8 SSD information	
"↲ "	Start calibration of supervised outputs (press ↲)	
"↲ "	Calibration completed successfully √	
"ESC"	A1 Calibration of supervised outputs	Calibration is ready. Scroll to another menu or press "ESC".

NOTE! After the calibration it is recommended do a "Safe shutdown of the control unit" (see menu H8/S5, page 141). This will save the SSW data (e.g. the calibration values) in a Flash ROM.

[52] Control unit outputs S0-S3 and 4583 outputs 0-1: One end-of-line resistor (33K) in the last unit or one resistor (33K) in up to five units.
3364 outputs (VO0-VO1): One end-of-line capacitor (470 nF) in the last unit or one capacitor (470 nF) in up to five units.

27.2 Sensitive fault detection mode (H5/A2)

To increase the possibilities to detect faults during the commissioning, it is possible to use the "Sensitive fault detection mode". The time delay for each fault will then be reduced, i.e. you might find some faults now instead of later.

The "Sensitive fault detection mode" turned on is indicated by the LED **Routing equipment** "Fault tx activated" (L13) and the "Fault" output for routing equipment is "activated" and by in the display's symbol area..

NOTE! Don't forget to turn off this mode after the commissioning.

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 88.
Scroll to menu H5.	H5 Service	
"↲ "	A1 Calibration of supervised output A2 Sensitive fault detection mode A3 Service mode for COM-loop A4 Display current consumption in control unit A5 Display current consumption on COM-loop A6 Display statistics for communication A7 Activate address setting mode for DU A8 SSD information	
Scroll to menu A2.	A2 Sensitive fault detection mode	
"↲ "	Sensitive fault detection mode is not active Press ↲ to activate	
"↲ "	 Sensitive fault detection mode was activated Press ↲ to deactivate	
"↲ "	Sensitive fault detection mode is not active Press ↲ to activate	
"ESC"	A2 Sensitive fault detection mode	Scroll to another menu or press "ESC".

27.3 Service mode for COM-loop (H5/A3)

This mode can be used when commissioning an installation and by maintenance. The COM loop communication (polling) will be turned off but there is still voltage (24 V DC) on the loop in the A-direction only, in the B-direction only **or** in both directions at the same time.

A volt meter can be used, e.g. to check the voltage / voltage drop on different places on the loop or to find a single break on the loop. (Since there is voltage on the loop, short circuit isolators will work normally.)

It is recommended to do this check also when EBL512 G3 is power supplied via the backup battery only, since the battery voltage can be different (compared with the rectifier voltage) due to the battery condition, backup duration, etc.

The "Service mode for COM-loop" is indicated by LED **Fault / Disablements** "General disablements" (L10).

If you log off this menu, the "Service mode for COM-loop" will be terminated automatically.

NOTE! If short-circuit is detected when a COM loop is in service mode, the loop will be disabled and a fault message will be displayed:

```
FAULT: Short-circuit SCI A <-> SCI B,
loop x, control unit xx
```

…independent of where the short-circuit is situated on the loop.

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 88.
Scroll to menu H5.	H5 Service	
"↲ "	A1 Calibration of supervised output A2 Sensitive fault detection mode A3 Service mode for COM-loop A4 Display current consumption in control unit A5 Display current consumption on COM-loop A6 Display statistics for communication A7 Activate address setting mode for DU A8 SSD information	
Scroll to menu A3.	A3 Service mode for COM-loop	
"↲ "	Service mode for loop: 0 CU: 00 A Direction B Direction Both	Write loop and control unit numbers. Use "▼" or "▲" to scroll to the wanted

		direction(s) and press "↲ ".
"↲ "	Service mode control unit 00 COM-loop 0 Supplied from A-direction only	When you leave this menu by pressing "ESC" or "↲ " the service mode will be turned off, i.e. the communication will be turned on in the normal way.
"ESC" or "↲ "	A3 Service mode for COM-loop	Scroll to another menu or press "ESC".

27.4 Display current consumption in unit (H5/A4)

Control unit: The total current consumption (including the charging current at 24V) for the selected control unit (c.i.e.) when it is connected to the mains (230 V AC), i.e. this function is not working by battery backup.

Charging: The battery charging current for the selected control unit (c.i.e.). Also battery temperature and "low capacity voltage" will be shown. [53]

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 88.
Scroll to menu H5.	H5 Service	
"↲ "	A1 Calibration of supervised output A2 Sensitive fault detection mode A3 Service mode for COM-loop A4 Display current consumption in control unit A5 Display current consumption on COM-loop A6 Display statistics for communication A7 Activate address setting mode for DU A8 SSD information	
Scroll to menu A4.	A4 Display current consumption in control unit	
"↲ "	Select control unit: : 00 (press ↲)	Write control unit number and press "↲ ".
"↲ "	Please wait.....	
	No reply from control unit.....	If the control unit don't exist or don't answer.
	Current consumption in control unit 00: From rectifier: xxxx mA Charging: xxxx mA (battery temperature xx°C) Low capacity voltage diff: xxxxx mV [53]	
"↲ " or "ESC"	A4 Display current consumption in unit	Scroll to another menu or press "ESC".

[53] During the battery capacity check the voltage is measured with and without a resistor. A difference between these two voltages > 700 mV will result in a "Low battery capacity" fault.

27.5 Display current consumption on COM-loop (H5/A5)

The current consumption (an average value) for each COM loop can be displayed.

NOTE! No or very small current consumption (< 10 mA) cannot be presented correctly / precisely since the accuracy is ±5 mA.

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 88.
Scroll to menu H5.	H5 Service	
"↲ "	A1 Calibration of supervised output A2 Sensitive fault detection mode A3 Service mode for COM-loop A4 Display current consumption in control unit A5 Display current consumption on COM-loop A6 Display statistics for communication A7 Activate address setting mode for DU A8 SSD information	
Scroll to menu A5.	A5 Display current consumption on COM-loop	
"↲ "	Display current consumption on COM-loop: 0 control unit: 00 (press ↲)	Write loop number and control unit number and press "↲ ".
"↲ "	Please wait.....	
	No reply from control unit.....	If the control unit don't exist or don't answer.
	Current consumption on COM-loop: 0 control unit 00 is xxxx mA	The current consumption accuracy is ±5 mA.
"↲ " or "ESC"	A5 Display current consumption on COM-loop	Scroll to another menu or press "ESC".

27.6 Display statistics for communication (H5/A6)

The statistics can be used during commissioning, service, etc.

Number of pollings is the number of pollings / "questions" sent out by the control unit to all the units connected on the COM loop.
Parity fault is the received number of parity faults and % (faults in relation to pollings).
Number of bit faults is the received number of bit faults and % (faults in relation to pollings).
No answer is the received number of answer faults / no answers and % (faults in relation to pollings).

Bit length fault is the received number of bit length faults and % bit length faults in relation to the pollings.

The number of Parity faults, Number of bit faults, No answer and Bit length faults shall normally be "0" or as close to "0" as possible. If not, there are some communication problems that have to be investigated. Check the COM loop, connections and the loop units.

All values are set to "0" after restart and/or after re-connection of COM loop (via menu H8/S1).

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 88.
Scroll to menu H5.	H5 Service	
"↵ "	A1 Calibration of supervised output A2 Sensitive fault detection mode A3 Service mode for COM-loop A4 Display current consumption in control unit A5 Display current consumption on COM-loop A6 Display statistics for communication A7 Activate address setting mode for DU A8 SSD information	
Scroll to menu A6	A6 Display statistics for communication	
"↵ "	Display statistics for COM-loop: 0 control unit: 00	Write loop number and control unit number and press "↵ ".
"↵ "	Please wait.....	
	No reply from control unit.....	If the control unit don't exist or don't answer.

	Number of pollings: nnnnnnn Parity fault: 000000 00.0% Number of bits fault: 000000 00.0% No answer: 000000 00.0% Bit length fault: 000000 00.0%	Note! The values are not live updated.
"↲ " or "ESC"	A6 Display statistics for communication	Scroll to another menu or press "ESC".

27.7 Activate address setting mode for DU (H5/A7)

This function can be used by commissioning / service engineer to activate the address setting mode in the following Display Units connected to the c.i.e.:

- Ext. Presentation unit 1728
- Alert Annunciation units 1735 & 1736
- Ext. FBPs 1826 & 1828

A specific unit or all units connected to one c.i.e. can be activated for address setting.

NOTE! The units have to be in operation and in quiescent condition, i.e. the units have to have an address already.

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 88.
Scroll to menu H5.	H5 Service	
"↲ "	A1 Calibration of supervised output A2 Sensitive fault detection mode A3 Service mode for COM-loop A4 Display current consumption in control unit A5 Display current consumption on COM-loop A6 Display statistics for communication A7 Activate address setting mode for DU A8 SSD information	
Scroll to menu A7	A7 Activate address setting mode for DU	
"↲ "	Activate address setting mode for DU: Control unit: 00, display unit: 00 All	Write control unit number, and the unit's address or press "►" to select "All" (i.e. all display units on the selected control unit).
"↲ "	Address setting mode for display unit 00, control unit 00 activated	The address can now be edited in the display unit (DU) respectively.
"↲ " or "ESC"	A7 Activate address setting mode for DU	Scroll to another menu or press "ESC".

27.8 SSD information (H5/A8)

SSD name As written in the EBLWin dialog box "System Properties" (Name).

Downloaded Date and time when the SSD was downloaded.

User User name for the person who performed the SSD download.

Computer Computer name (if programmed) for the PC that was used for the SSD download.

Domain Domain (if programmed) for the PC that was used for the SSD download.

EBLWin key The unique number for EBLWin key.

Convention (i.e. country specific functions, default EBLWin settings, etc.) is set in conjunction with the installation of EBLWin. [54]

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 88.
Scroll to menu H5.	H5 Service	
"↲ "	A1 Calibration of supervised output A2 Sensitive fault detection mode A3 Service mode for COM-loop A4 Display current consumption in control unit A5 Display current consumption on COM-loop A6 Display statistics for communication A7 Activate address setting mode for DU A8 SSD information	
Scroll to menu A8	A8 SSD information	
"↲ "	SSD name: Xxxxxxxxxxxxxxx Downloaded: yyyy-mm-dd hh:mm User: Nnnnnnn Computer: Ccccccccccccc Domain: Ddddddddddd EBLWin key: 1234567890 Convention: XXX Print	If printer is mounted the soft key "Print" will be visible, else not. Press "Print" to print the SSD information.
"↲ " or "ESC"	A8 SSD information	Scroll to another menu or press "ESC".

[54] To change the convention via EBLWin, "Level 2" has to be selected, which require a special password. Alt. EBLWin can be re-installed.

28 FAULT Acknowledge (H6)

Regarding fault indication, etc., see chapter "Fault", page 59.

See also chapter "Fault acknowledge", page 77.

All faults and the status / action are stored in the event log and can be listed, see chapter "Event log (H4/U7)", page 116.

In menu H6 can be listed up to 300 faults:

- Not corrected (not serviced) and not acknowledged faults (no status information)
- Not corrected (not serviced) but acknowledged faults (/Acknowledged)
- Corrected (serviced) but not acknowledged faults (/Serviced)

The most recent fault is shown on top of the list.

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 88.
Scroll to menu H6.	H6 FAULT Acknowledge	
"↵ "	FAULT: Low battery capacity, control unit 00 yyyy-mm-dd hh:mm FAULT: No reply zone 045 address 06 technical number 000005 Alarm text for 045-06 (user definable) yyyy-mm-dd hh:mm /Serviced FAULT: No reply zone 021 address 05 technical number 000114 Alarm text for 021-05 (user definable) yyyy-mm-dd hh:mm /Acknowledged Fault 1/3 is selected Print | Previous page | Next page	If there are no faults --List is empty-- will be shown. It is a dynamic list in which you can scroll with "▼" or "▲". If printer is mounted the soft key "Print" will be visible, else not. Press "Print" for a print-out of all faults the latest **hour** **day** **week** **month** **All** To acknowledge a fault, select it and press "↵ ". The selected fault has a boarder around it.

"↵ "	FAULT: Low battery capacity, control unit 00 yyyy-mm-dd hh:mm /Acknowledged FAULT: No reply zone 045 address 06 technical number 000005 Alarm text for 045-06 (user definable) yyyy-mm-dd hh:mm /Serviced FAULT: No reply zone 021 address 05 technical number 000114 Alarm text for 021-05 (user definable) yyyy-mm-dd hh:mm /Acknowledged Fault 1/3 is selected Print | Previous page | Next page	A corrected / serviced fault that is acknowledged will disappear from this list.
"ESC"	H6 FAULT Acknowledge	Scroll to another menu or press "ESC".

29 Perform ZONE TEST (Test mode) (H7)

Normally, zones are tested during the monthly test via menu H1. Via this menu (H7) it is also possible to perform the zone test. Up to 100 zones can be set in test mode.
In test mode, only the alarm points are tested, i.e. no outputs (e.g. sounders) will be activated during the test. (Alarm devices can be tested via menu H8/S4 and any output via menu H8/S8 or via EBLWin when you are logged on.)

If a real fire alarm is activated by **an alarm point not in test mode**, the normal fire alarm functions will be activated, i.e. fire alarm presentation, outputs (sounders) activated, routing equipment (fire brigade tx) activated, etc.

See also chapter "The information area priority order", page 25.

NOTE! If the control unit door is left open, the output(s) for routing equipment (fire brigade tx) might be disabled (if set so in EBLWin).

There will be an automatic test mode ending one hour after the latest tested alarm point.

One or more zones in test mode are indicated by the LED "Test mode" (L8). The green polling LED in the 440x detectors will be turned off in test mode.

The zones are set one by one in test mode and the test mode has to be ended for each zone one by one.

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 88.
Scroll to menu H7.	H7 Perform ZONE TEST	
"↲ "	Set in test mode Zone 000	
Write the zone number (e.g. 001). "↲ "	Set in test mode Zone 001 √ -- End test mode ---------- Zone 001 	Press "↲ " to start the test mode. Indicated by "√" and a beep. If the specified zone doesn't exist, it will be indicated with "X" instead of "√" and a beep. All zones set in test mode will be shown in the "End test mode" list. Use the soft key "→|" to toggle between **Set in test mode** and **End test mode list**.
"→|"	-- Set in test mode ---------- Zone _ _ _ √ End test mode Zone 001 	After the testing, select a zone in the "End test mode" list and press "↲ ". The test mode has to be ended for all zones.

The zone(s) will **stay in test mode until the test mode is ended**. The test mode is ended in this menu or automatically one hour after the latest test alarm.

You will be automatically logged out 15 minutes after the latest "action" (using of any key) but the zone(s) will **stay in test mode until the test mode is ended**, see above.

Perform the test as quickly as possible, since the output(s) for routing equipment (fire brigade tx) are disabled (also the parts of the zones in test mode, not visible for the test personnel, are disabled).

In order to shorten the testing time, any time delay for the detectors / zones in test mode will be "disabled", i.e. fire alarm will be detected faster than normally.

In the tested alarm point, the LED will light up, and the LEDs "Fire" (L1) in the c.i.e. will light up, approx. 10 seconds, then the alarm point will be automatically reset. The printer, if available, will print out every tested alarm point (Zone: xxx Address: xx Time: HH.MM).

An alarm point in test mode will not be able to generate a fault. An alarm point "in alarm" when the test mode is ended will activate a normal fire alarm.

"↲ " for each zone to end the test mode.	Set in test mode Zone 000	No zones in test mode. Set new zones in test mode or press "ESC".
"ESC"	H7 Perform ZONE TEST	The LED "Test mode" (L8) is turned OFF. If more zones are to be tested, continue as above. If not, scroll to another menu or press "ESC".

NOTE_1! During the test, the following information will be shown in all other c.i.e. displays:
Zone 001 in test mode
Zone 002 in test mode
etc.

NOTE_2! If an alarm point (e.g. a manual call point) is in alarm state when the test mode is ended, there will be a fire alarm activated.

NOTE_3! When the "Fire door closing" function is used, the fire door will be closed also when the detectors controlling the door are tested in test mode.

30 Maintenance (H8)

30.1 Password for service / maintenance

Only authorised personnel have access to the level 3A menus (e.g. H8) and a p**assword for level 3A (Service technician) is required.**

30.2 Dis- / Re-connect loop / zone line input (H8/S1)

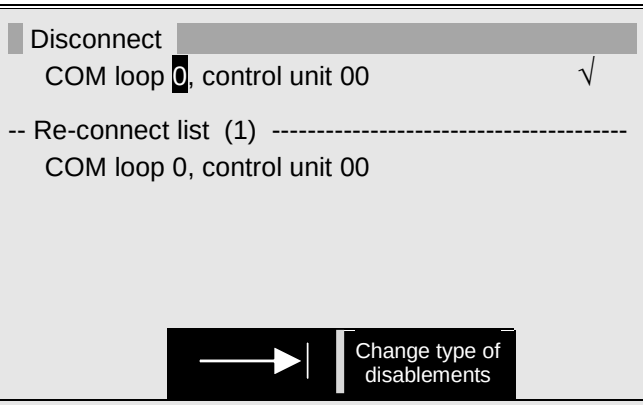
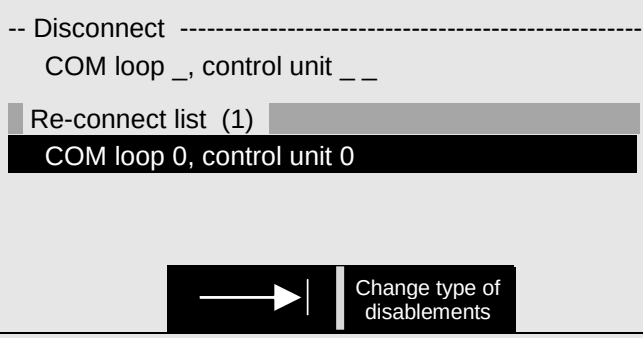
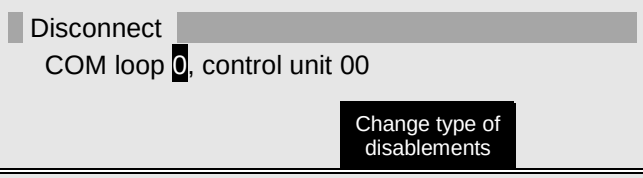
Before physical connection / disconnection of loop units, etc. the loop (or zone line) shall be disconnected (voltage free) in order to avoid damage on the units and the c.i.e.

Zone line input requires an 8 zones expansion board 4580 in the control unit or an Addressable multipurpose I/O unit 3361 connected on a COM loop.

One or more disconnected "loops" are indicated by LED **Fault** / **Disablements** "General disablements" (L10) and listed in menu H4/U1.

NOTE! When you re-connect a COM loop all the statistics shown in menu H5/A6 will be erased and set to "0".

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 88.
Scroll to menu H8.	H8 Maintenance	
"↲ "	S1 Dis- / Re-connect loop / zone line input S2 Acknowledge SERVICE signal S3 Clear weekly average S4 Test of alarm devices S5 Safe shut down of control unit S6 Activate address in alarm mode S7 Synchronize the control units S8 Activate / Reset outputs	Via menu S1 can a COM loop, an exp. board zone line input and an addressable zone interface input be Dis- / Re-connected
"↲ "	Disconnect COM loop 0, control unit 00 Change type of disablement	Use the soft key "Change type of disablements" to toggle between: **COM loop** **Zone line input** (exp. board) **Zone interface input** (loop unit) to disconnect, which will be indicated with "√" and a beep.

Write COM loop number and control unit number. "↲ "		The loop will directly be shown in the Re-connect list. If the specified loop etc. doesn't exist, it will be indicated with "X" instead of "√" and a beep. Use the soft key "→|" to toggle between the **Disconnect** and **Re-connect list**.
"→|"		Select in the Re-connect list with "▼" (in this example there is only one item) and press "↲ ". Re- connected loop will disappear from the list, indicated with a beep.
		Disconnect (or Re-connect) another "loop" or press "ESC".
"ESC"		Scroll to another menu or press "ESC".

30.3 Acknowledge SERVICE signal (H8/S2)

When SERVICE signal is generated in the system, following symbol is shown in the display's symbol area: See also chapter "Sensors activating SERVICE signal (H4/U5)", page 114.

Sensor = analog smoke detector.

Valid only for 430x and 440x sensors in NORMAL mode:
When service signal from a sensor is acknowledged, the sensor is given a default week average sensor value (same as for a new / clean sensor, i.e. "1" = 0.1 %/m). **First** replace the sensor and **then** acknowledge the service signal **as soon as possible**. The first week average sensor value after acknowledge will be calculated within one hour, then each week.

NOTE! If a sensor 430x and 440x in NORMAL mode is replaced without having generated service signal, it has to be reset to the default week average sensor value via menu H8/S3, page 138.

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 88.
Scroll to menu H8.	H8 Maintenance	
"↲ "	S1 Dis- / Re-connect loop / zone line input S2 Acknowledge SERVICE signal S3 Clear weekly average S4 Test of alarm devices S5 Safe shut down of control unit S6 Activate address in alarm mode S7 Synchronize the control units S8 Activate / Reset outputs	
Scroll to menu S2.	S2 Acknowledge SERVICE signal	
"↲ "	Sensor, Zone ZZZ address AA needs service technical address xxxxxx 2012-12-03 09:09:15 Sensor, Zone XXX address AA needs service technical address xxxxxx 2012-11-03 19:09:35 Sensor 1/2 is selected Previous page | Next page	If there are no sensors --List is empty-- will be shown. This is a dynamic list in which you can scroll. The most recent service signal / sensor is shown on top of the list. Use "▼" or "▲" to select a sensor (the selected sensor has a border). Press "↲ " to acknowledge the sensor.

"↵ "	Sensor, Zone XXX address AA needs service technical address xxxxxx 2012-11-03 09:09:35 Sensor 1/1 is selected Previous page | Next page	The acknowledged sensor disappears from the list. Continue like above or press "ESC".
"ESC"	S2 Acknowledge SERVICE signal	Scroll to another menu or press "ESC".

The "Service symbol" will be turned off when all sensors have been acknowledged.

30.4 Clear weekly average (H8/S3)

Valid only for 430x and 440x sensors in NORMAL mode:
If a sensor (analog smoke detector) is replaced without having generated SERVICE signal, its week average sensor value has to be cleared and set to the default value (i.e. "1" = 0.1 %/m), otherwise the new / clean sensor will inherit the old sensor's value. It is possible to clear the week average sensor value for each sensor individually via this menu.

NOTE! **First** replace the sensor and **then** clear the week average value **as soon as possible**. Authorised service personnel only, must do this. Used incorrectly it can cause nuisance fire alarms.

The first week average sensor value (after clearing) will be calculated within one hour, then each week.

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 88.
Scroll to menu H8.	H8 Maintenance	
"↲ "	S1 Dis- / Re-connect loop / zone line input S2 Acknowledge SERVICE signal S3 Clear weekly average S4 Test of alarm devices S5 Safe shut down of control unit S6 Activate address in alarm mode S7 Synchronize the control units S8 Activate / Reset outputs	
Scroll to menu S3.	S3 Clear weekly average	
"↲ "	Clear weekly average zone: 000 address: 00 (press ↲)	Write the wanted zone and address and press "↲ ".
Write the zone and address numbers, (e.g. 001 and 01). "↲ "	Weekly average zone 001 address 01 cleared	
"ESC"	S3 Clear weekly average	Continue like above or scroll to another menu or press "ESC".

30.5 Test of alarm devices (H8/S4)

The programmable outputs of type "Alarm device"[55] can be collectively activated via this menu (H8/S4), which makes it possible to test the alarm devices.

The test cannot be started if a fire alarm already is activated in the system.

One or all control units can be selected. When the test starts, the alarm devices will sound continuously (steady)[56] for approx. 5 seconds, be silent for approx. 25 seconds, sound for approx. 5 seconds and so on.

NOTE! Disabled (and silenced) alarm devices will also be tested.

The test will continue for one hour if not stopped via this menu (H8/S4) or if a fire alarm is activated in the system.

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 88.
Scroll to menu H8.	H8 Maintenance	
"↲ "	S1 Dis- / Re-connect loop / zone line input S2 Acknowledge SERVICE signal S3 Clear weekly average S4 Test of alarm devices S5 Safe shut down of control unit S6 Activate address in alarm mode S7 Synchronize the control units S8 Activate / Reset outputs	
Scroll to menu S4.	S4 Test of alarm devices	
"↲ "	Test of alarm devices control unit: 00 All Press ↲ to start test.	Write control unit number or press "►" for "All". Press "↲ " to start the test.

[55] Including Addressable siren 3377 / 4477 and Addressable sounder base 3379.

[56] For the alarm devices 3377 / 4477 and 3379 the tone with the highest priority level (and type "alarm device") will be automatically selected.

"↲ "	Test of alarm devices, control unit 00 in progress. Press ↲ to end test	The test will continue for one hour if not stopped via this menu (S4) or if a fire alarm is activated in the system. Press "↲ " to end the test.
"↲ "	Test of alarm devices ended. Press ↲ to return to menu	
"↲ "	S4 Test alarm devices	Scroll to another menu or press "ESC".

30.6 Safe shut down of control unit (H8/S5)

It's recommended to do a safe shut down of control unit before you power off a control unit (i.e. no 230 V AC and no battery). Safe shut down will save the SSW in a Flash ROM and put the CPUs at rest. [57] See also chapter "Restart", page 84.

It's recommended to do a safe shut down after commissioning the installation and after the calibration of supervised outputs, change of passwords etc. in order to save the new valid values, codes etc.

Safe shut down can be performed from any control unit and any control unit can be selected. A control unit without a front has to be shut down from another control unit.

NOTE! By restart and power off, the Fault tx output(s) will be "activated".

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 88.
Scroll to menu H8.	H8 Maintenance	
"↲ "	S1 Dis- / Re-connect loop / zone line input S2 Acknowledge SERVICE signal S3 Clear weekly average S4 Test of alarm devices S5 Safe shut down of control unit S6 Activate address in alarm mode S7 Synchronize the control units S8 Activate / Reset outputs	
Scroll to menu S5.	S5 Safe shut down of control unit	
"↲ "	Shut down control unit 00? No Yes	Write control unit number and press "▼" to select "Yes".
"▼" "↲ "	Ready for shut-down, break the power. Automatic restart within xxx seconds! ***xxx** will start at 300 seconds and countdown to 000 before the control unit will restart automatically. During the countdown the buzzer will start sounding since the communication between the Main and MMI boards has stopped. (Can be silenced via push button "Silence buzzer".)*	The SSW is now saved and the Main board and MMI board CPUs are at rest. You can now power off the control unit. If not, the control unit will restart automatically after 300 seconds (5 minutes).

[57] No safe shut down might also generate a fault ("FAULT: Read/write site data (SSW), control unit xx") when you power up the control unit again.

Power off / Power on or after 5 min.	FAULT: Restart control unit 00, code 53, address 0 yyyy-mm-dd hh:mm /Serviced FAULT: Restart control unit 00, code 03, address 0 yyyy-mm-dd hh:mm /Serviced Fault 1/2 is selected Print | Previous page | Next page	After a restart (see page 84), there will always be two restart faults. The code will be 00 / 50 after Power off / Power on restart and 03 / 53 after a countdown restart. Address 0. This fault has to be acknowledged, see chapter "FAULT Acknowledge (H6)", page 129.

NOTE!

Before the very first *safe shut down* the Flash ROM is empty. Then every time *safe shut down* is performed the valid data will be saved in the Flash ROM, i.e. any old data will be overwritten.

When the c.i.e. is powered up, the data stored in the Flash ROM will be used.

WARNING!

If *safe shut down* is **not** performed just before you power off a control unit, then by power on, the Flash ROM might be empty (i.e. default settings will be used) or the stored data might be old and not valid.

30.7 Activate address in alarm mode (H8/S6)

One alarm point (zone-address), not a whole zone, can be set in alarm. The built-in LED in the alarm point (e.g. a detector) will be turned on to indicate the alarm.

NOTE! All outputs, standard and programmable, which would have been activated by a normal fire alarm from the same alarm point, will now also be activated.

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 88.
Scroll to menu H8.	H8 Maintenance	
"↲ "	S1 Dis- / Re-connect loop / zone line input S2 Acknowledge SERVICE signal S3 Clear weekly average S4 Test of alarm devices S5 Safe shut down of control unit S6 Activate address in alarm mode S7 Synchronize the control units S8 Activate / Reset outputs	
Scroll to menu S6.	S6 Activate address in alarm mode	
"↲ "	Select zone: 000 address: 00 (press ↲)	
Write the zone number and address (e.g. 123-45). "↲ "	Select zone: 123 address: 45 (press ↲)	
"↲ "	First alarm: 123-45 1 zone in alarm Latest alarm: 123-45 --- Select zone: 123 address: 45 (press ↲)	Press "ESC" to leave this menu. The fire alarm has to be reset as a normal fire alarm (press "Reset").
"ESC" "Reset"	S6 Activate address in alarm mode	Scroll to another menu or press "ESC".

NOTE!

In all other control units the alarm will be presented as a "Test mode alarm":

	First alarm: 123-45 Alarm number 1(of 1) Test mode Zone Address 123-45 SMOKE Alarm text for 123-45 Menu	This manually activated fire alarm will be presented in all control unit displays and all ext. FBP displays and indicated by the LEDs "Fire" (L1) and "Fire brigade tx" (L4). This manually activated fire alarm has to be reset by the push button "Reset" (P3)

30.8 Synchronize the control units (H8/S7)

After any control unit restart, synchronization will start automatically. Synchronization can also be started via EBLWin and via this menu (H8/S7).

The control units have to be synchronized when the following fault message is shown: FAULT: Control unit xx has wrong information.

During the synchronization there will be information displayed for all control units in the system.

↻ (rotating clockwise) = Synchronization in progress for the control unit (CU) respectively.

√ = Synchronization completed successfully for the control unit (CU) respectively.

<Blank> = Synchronization failed for the control unit (CU) respectively.

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 88.
Scroll to menu H8.	H8 Maintenance	
"↲ "	S1 Dis- / Re-connect loop / zone line input S2 Acknowledge SERVICE signal S3 Clear weekly average S4 Test of alarm devices S5 Safe shut down of control unit S6 Activate address in alarm mode S7 Synchronize the control units S8 Activate / Reset outputs	
Scroll to menu S7.	S7 Synchronize the control units	
"↲ "	Start synchronization? No Yes	Press "▼", to select "Yes". Press "↲ " to start the synchronization.

To be continued on the next page.

"▼" "↲ "	Synchronization in progress... CU00 ↻ CU10 ↻ CU20 ↻ CU01 ↻ CU11 ↻ CU21 ↻ CU02 ↻ CU12 ↻ CU22 ↻ CU03 ↻ CU13 ↻ CU23 ↻ CU04 ↻ CU14 ↻ CU24 ↻ CU05 ↻ CU25 ↻ CU06 ↻ CU26 ↻ CU07 ↻ CU17 ↻ CU27 ↻ CU08 ↻ CU18 ↻ CU28 ↻ CU09 ↻ CU19 ↻ CU29 ↻	During the synchronization the progress symbol for each control unit is shown. In the example are CU15 & CU16 not programmed.
After a while.	Synchronization completed yyyy-mm-dd hh:mm CU00 √ CU10 √ CU20 √ CU01 √ CU11 √ CU21 √ CU02 √ CU12 √ CU22 √ CU03 √ CU13 √ CU23 √ CU04 √ CU14 √ CU24 √ CU05 √ CU25 √ CU06 √ CU26 √ CU07 √ CU17 √ CU27 √ CU08 √ CU18 √ CU28 √ CU09 √ CU19 √ CU29 √	Date and time for the latest completed synchronization. The symbol "√" means that the synchronization succeeded. If the symbol "√" is missing the synchronization has failed.
"ESC"	Start synchronization? No Yes	
"ESC"	S7 Synchronize the control units	Scroll to another menu or press "ESC".

30.9 Activate / Reset outputs (H8/S8)

Any output[58] can be activated, i.e. the function can be tested. (Can also be done via EBLWin.)

The selected output will be activated no matter if the control expression is true or not.

The selected output will be reset only if the control expression is false (not true). If the control expression is true when you reset the output via menu H8/S8, the output will remain activated until the control expression is false (not true) again.

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 88.
Scroll to menu H8.	H8 Maintenance	
"↵ "	S1 Dis- / Re-connect loop / zone line input S2 Acknowledge SERVICE signal S3 Clear weekly average S4 Test of alarm devices S5 Safe shut down of control unit S6 Activate address in alarm mode S7 Synchronize the control units S8 Activate / Reset outputs	
Scroll to menu S8.	S8 Activate / Reset output	Via menu S8 can loop unit output, control unit output and expansion board output be activated and reset.
"↵ "	Activate Loop unit 000000 output 0	Use the soft key "Change type of output" to toggle between: **Loop unit output** **Control unit output** (S0-S3 and R0-R1) **Exp. board output** Write loop unit technical number and output number and press "↵ " to activate, which will be indicated with "√" and a beep. The

[58] Including Addressable siren 3377 / 4477 and Addressable sounder base 3379.

	Change type of output	output will directly be shown in the Reset list
Write loop unit technical number and output (e.g. 000001, 0). "↲ "	Activate Loop unit 000000 output 0 √ -- Reset list (1) ---------- Loop unit 000001 output 0	If the specified output doesn't exist, it will be indicated with "X" instead of "√" and a beep. Use the soft key "→|" to toggle between **Activate** and **Reset list**.
"→|"	-- Activate ---------- Loop unit _ _ _ _ _ _ output _ Reset list (1) Loop unit 000001 output 0 →| Change type of output	Select in the Reset list with "▼" (in this example there is only one output) and press "↲ ". The reset output will disappear from the list, indicated with a beep.
"↲ "	Activate Loop unit 000000 output 0 Change type of output	Continue like above or press "ESC".
"ESC"	S8 Activate / Reset output	Scroll to another menu or press "ESC".

31 Interlocking outputs and inputs (H9)

31.1 Activated interlocking outputs / inputs (H9/C1)

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 88.
Scroll to menu H9.	H9 Interlocking outputs and inputs	
"↲ "	C1 Activated interlocking outputs / inputs C2 Activate / deactivate interlocking output C3 Disable / re-enable interlocking output	
"↲ "	C1 Activated interlocking outputs / inputs	Via menu C1 can activated interlocking outputs and inputs be listed.
"↲ " Depending on activated outputs, and/or inputs, the following will be shown:	Interlocking area AAA point PP output active User definable text message (if progr.) yyyy-mm-dd hh:mm Interlocking area AAA point PP input/output active User definable text message (if progr.) yyyy-mm-dd hh:mm Interlocking area AAA point PP input active User definable text message (if progr.) yyyy-mm-dd hh:mm 3 of 5 Print	It is a dynamic list in which you can scroll with "▼" or "▲". If printer is mounted the soft key "Print" will be visible, else not. Press "Print" for a print-out of all items in the list.
"ESC"	C1 Activated interlocking outputs / inputs	Scroll to another menu or press "ESC".

31.2 Activate / deactivate interlocking output (H9/C2)

The output in each interlocking combination (area / point) can be manually activated via this menu. The corresponding interlocking input will be "monitored" in the same way as if the output was activated by its control expression.

The output in each interlocking combination (area / point) can be manually deactivated via this menu. **NOTE!** The output will be deactivated also if its control expression still is true and cannot be activated again until after its control expression has been false again. Also a latched output will be deactivated.

If an interlocking output is activated via its control expression and with latching output selected (in EBLWin), the output **has to** be deactivated via this menu.

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 88.
Scroll to menu H9.	H9 Interlocking outputs and inputs	
"↲ "	C1 Activated interlocking outputs / inputs C2 Activate / deactivate interlocking output C3 Disable / re-enable interlocking output	
Scroll to menu C2.	C2 Activate / deactivate interlocking output	
"↲ "	Activate Interlocking output area: 000 point: 00	Write area number and address and press "↲ " to activate, which will be indicated with "√" and a beep. The output will directly be shown in the Deactivate list.
Write the area number and point (e.g. 001 and 01. "↲ "	Activate Interlocking output area: 001 point: 01 √ -- Deactivate list (1) ---------- Interlocking output area: 001 point: 01 →|	If the specified output doesn't exist, it will be indicated with "X" instead of "√" and a beep. Use the soft key "→|" to toggle between **Activate** and **Deactivate list**.

"→|"	-- Activate ---------- Interlocking output area: _ _ _ point: _ _ Deactivate list (1) Interlocking output area: 001 point: 01 	Select in the Deactivate list with "▼" (in this example there is only one output) and press "↲ ". The deactivated output will disappear from the list, indicated with a beep.
"↲ "	Activate Interlocking output area: 000 point: 00	Continue as above or press "ESC".
"ESC"	C2 Activate / deactivate interlocking output	Scroll to another menu or press "ESC".

31.3 Disable / re-enable interlocking output (H9/C3)

Interlocking outputs (Type = Interlocking) can be individually disabled via this menu (and collectively via menu H2/B3).

The "Interlocking Combination" (Area / Point) is to be entered to disable the output. Up to 400 interlocking outputs can be disabled per control unit **but** max. 4000 for the whole system.

Disabled interlocking outputs are listed in menu H4/U1 from which it is also possible to get a print-out.

The LED **Fault / Disablements** "General disablements" (L10) is also indicating one or more disabled interlocking outputs.

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 88.
Scroll to menu H9.	H9 Interlocking outputs and inputs	
"↵ "	C1 Activated interlocking outputs / inputs C2 Activate / deactivate interlocking output C3 Disable / re-enable interlocking output	
Scroll to menu C3.	C3 Disable / re-enable interlocking output	Via menu C3 can interlocking outputs be disabled / re-enabled.
"↵ "	Disable Interlocking output area: 000 point: 00	Write area number and address and press "↵ " to disable, which will be indicated with "√" and a beep. The output will directly be shown in the Re-enable list.
Write the area number and point (e.g. 001 and 01). "↵ "	Disable Interlocking output area: 001 point: 01 √ -- Re-enable list (1) ---------- Interlocking output area: 001 point: 01 →|	If the specified output doesn't exist, it will be indicated with "X" instead of "√" and a beep. Use the soft key "→|" to toggle between **Disable** and **Re-enable list**.

"→|"	-- Disable ---------- Interlocking output area: _ _ _ point: _ _ Re-enable list (1) Interlocking output area: 001 point: 01 	Select in the Re-enable list with "▼" (in this example there is only one output) and press "↲ ". The re-enabled output will disappear from the list, indicated with a beep.
"↲ "	Disable Interlocking output area: 000 point: 00	Continue as above or press "ESC".
"ESC"	C3 Disable / re-enable interlocking output	Scroll to another menu or press "ESC".

31.4 Change password (H10)

For security reasons, the password could be changed.

Action	Text in display	Comments
"Menu"		According to chapter "Access", see page 88.
Scroll to menu H10.	H10 Change password	
"↵ "		
"↵ "	Log in name Password: ▮ New password: Verify:	
Enter the old password, the new password and again the new password.	Log in name Password: ****** New password: ****** Verify: ******	The six digits are replaced by ****** in the display.
	Incorrect password, NO change or Password changed	
"ESC"	▒▒ menu H1 Perform monthly test H2 Disable or re-enable H3 Set calendar and clock H4 Present system status H5 Service H6 FAULT Acknowledge H7 Perform ZONE TEST H8 Maintenance H9 Interlocking outputs and inputs H10 Change password Escape menu	The password is now changed to the new one. Scroll to another menu or press "ESC" or "Escape menu".

As long as you don't close the door you can enter the menu system again without a password.

NOTE! After change of password it is recommended do a "Safe shutdown of the control unit" (see menu H8/S5). This will save the SSW data (e.g. the new password) in a Flash ROM (see page 141).

If the valid password(s) are unknown, EBLWin has to be used change the password(s).

32 Annual control

The building occupier is highly recommended, once a year, to do some tests, beside the monthly tests. To avoid the Fault tx output(s) to be activated, they can be disabled via menu H2/B5 (or via an open door, se chapter "Open door", page 40.).
Regarding the fault condition, see chapters "Fault", page 59 and "Fault messages", page 61.

NOTE! Most of the faults have a delay.

Each control unit should be tested as follows:

- Perform monthly test (menu H1).
- Remove one battery fuse (e.g. F2 on the Main board 5010). The following fault message is to be shown:

  FAULT: Battery not connected CU xx
  NOTE! xx is depending on control unit (xx=00-29).
- Put back the fuse and acknowledge the fault (menu H6).
- Remove fuse F4 on the Main board 5010.
  The following fault message is to be shown:

  FAULT: Supervised output 0, CU xx
  NOTE! xx is depending on control unit (xx=00-29).
- Put back the fuse and acknowledge the fault.
- Check the manual call points (the glass). Take required measures. Use the manual call point test key to activate fire alarm.
- Check some control outputs. Are they activated according to programmed control expressions?

33 How to change paper in the printer

When the paper roll is almost empty, a red line appears on one edge of the paper. Change the paper roll before it is completely empty! Always have a spare paper roll on site (paper width 58 mm).

Change the paper roll as follows:

- Read all instructions before changing the paper roll.
- Open the control unit door.
- Open the printer cover, i.e. press the green illuminated release button (in the middle) on top of the printer front.
- Remove the remains of the old paper roll.
- Place the new paper roll in the printer. Make sure that it unrolls in the correct direction – like the old one.
- Pull out 50 mm paper and close the cover.
- Tear off the paper, then press the Paper feed button (to the right) on top of the printer front, to check the paper feed function and tear off the paper.
- Close the control unit door.

34 Replacing a TLON connection board and/or the Main board

By the TLON network programming, some unique data will be stored in a memory on the 5090 TLON connection board and some will be stored in a memory on the 5010 main board.

Replacing only a TLON connection board 5090
After replacing the board:
In TLON Manager version 1.2 do "Replace", "Update" and "Save".
In TLON Manager version 2.0 do "Replace" and "Update" ("Save" is aut. done).

Replacing both a TLON connection board 5090 and also the Main board 5010
After replacing the boards:
In TLON Manager version 1.2 do "Replace", "Update" and "Save".
In TLON Manager version 2.0 do "Replace" and "Update" ("Save" is aut. done).

Replacing only the Main board 5010
After replacing the main board, put back the TLON connection board(s) in the same position as on the replaced main board:
In TLON Manager version 1.2 do "Update" and "Save".
In TLON Manager version 2.0 do "Update" ("Save" is aut. done).

35 Battery maintenance

The batteries - 2 x 12 V, 28 Ah (e.g. Panasonic LC-P1228AP) - are placed inside the control unit. Larger batteries (≤ 65 Ah) have to be placed outside the control unit, e.g. in a separate battery cabinet, etc.

The control unit supervise and charge the batteries and a fault will be generated for any battery trouble.

The batteries, rechargeable Sealed Lead-Acid batteries, shall fulfil UL94V-0. The batteries are normally maintenance-free but the producer's instructions shall always be followed.

The ambient temperature affects the battery's capacity, self discharge and life span. The temperature should preferably not be higher than normal room temperature (approx. 20-22°C).
For highest safety, the batteries used in a fire alarm installation should not be more than four years old.

CAUTION
Risk of explosion if battery is replaced by incorrect type.
Dispose used batteries according to the producer's instructions and national regulations.

36 How to avoid unnecessary (nuisance) fire alarms

We all realise, when life, buildings, production facilities, etc. shall be saved, it is of utmost importance that an initial fire is detected as soon as possible. That's why more and more automatic fire alarm systems are installed.

In an automatic fire alarm installation, especially if smoke detectors (sensors) are used, everybody in the building needs to be informed how to avoid so called unnecessary (nuisance) fire alarms.

To avoid trouble and unnecessary expenses there are a couple of things to bear in mind. Here are some advice and tips.

Tobacco smoke

The detectors (sensors) cannot sense the difference between "smoke" and "smoke". They cannot separate tobacco smoke from smoke from a fire. Intensive tobacco smoking in conjunction with bad ventilation can cause a fire alarm.

Welding, grinding, cutting, sawing & drilling

These kinds of jobs cause smoke.

Carpet welding

Welding of plastic carpets causes a smoke that can be almost invisible, but it still influences the smoke detectors (sensors).

Cooking fumes, toasting & candles

It is not only "normal smoke" that influences smoke detectors (sensors). It is all kinds of "combustion products", caused by cooking (frying/grilling), toasting, etc. Warning! Be careful when smoke detectors (sensors) are mounted near / close to such activities.

Special environments

In certain premises a special environment can exist, which can influence smoke detectors (sensors) and cause alarm. It can be ions (from plastics), flour dust, oil haze, aerosols, strong perfumes, strong ventilation, insecticides, disinfecting sprays, etc. If many odd and unnecessary alarms occur, the environment must be examined and perhaps other detector types have to be chosen.

Steam / hot air

Smoke and heat detectors are influenced by steam and hot air, e.g. from an oven, dry-blower, heater, etc.

Exhausts

Exhausts from cars / trucks, lift trucks, lawn mowers, etc. influences smoke detectors (sensors). If windows and doors are open, exhausts can "slip in" that way.

Lack of maintenance

Smoke detectors (sensors) are influenced by their environment and become "dirty". In an analog system (like EBL512 G3) a Service signal is given when it is time to exchange the smoke detectors (sensors) to new ones. The alternative is to exchange detectors at given periods, to be on the safe side.

Change in activities or wrong choice of detector

If the activities in the premises are altered, the detector choice might also need to be altered. Due to special environments, see above, an in-appropriate detector type might have been chosen from the beginning and thus cause unnecessary alarms.

Miscellaneous

Choosing another type of detector can solve certain problems. Bear also in mind, that the coverage area can be different for different types of detectors.

It is however not always the best action to change detector type. Here is a list of other actions, programmed via EBLWin, which can be used:

- Another alarm algorithm can be used (e.g. during working hours).
- Alarm delay for smoke detectors / sensors can be used.
- Two-zone or two-unit dependent (co-incidence) fire alarm activation can be used.
- In an installation with addressable detectors / sensors (e.g. EBL512 G3), the affected detectors can be individually disabled (or whole zones) for temporary work in the premises. Bear in mind that the smoke spreads, and consideration must be taken to adjacent detectors / zones. Disablements can be done automatically via a time channel (built-in or external) or via menu (H2). Automatic re-enabling can be used.
- If there is an alarm organisation for the personnel on site, the alert annunciation function can be used.
- Pre-warning can be used as information before a fire alarm is activated.

37 Information regarding radioactive radiation source

Today, Panasonic have no ionization smoke detectors but old detectors connected to the EBL512 G3 installation might be old smoke sensors / detectors of the ionization type. They contain a small radioactive radiation source, normally Americium 241.

When these sensors / detectors gets dirty and when service signal has been activated in the system, contact your local dealer for cleaning / replacement of the sensors / detectors.

Metal objects must absolutely not be stuck into the sensor / detector. Static electricity might destroy the detector.

Defective / faulty, discarded and replaced sensors / detectors shall be taken care of as radioactive waste. They shall be packed in chock absorbing material to make a stable parcel.

PLEASE NOTE!
Damaged sensors / detectors shall also be packed in a sealed packet whose surface must not be contaminated, that is, not be soiled with loose radioactive dust.

National regulations have to be followed.

38 Revision history

The changes in conjunction with the latest revision are, when possible, written with red font colour in the document.

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Panasonic ideas for life

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